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ORIGINAL ARTICLES.

IDEAL CATGUT STERILIZATION.

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The aseptic absorbable ligature is one of the greatest achievements of modern surgery. In his first communication to the profession on this subject Lister alludes to the advantages of the aseptic ligature as follows: "If the antiseptic ligature be employed it merely inflicts a wound or injury upon the vessel, without introducing any permanent cause of irritation. The injured part, therefore, becomes repaired after the manner of a subcutaneous wound, without passing through the process of granulation and suppuration, which is induced by the employment of the ordinary septic ligature." Perhaps no other surgical procedure has ever enjoyed the confidence of the entire profession throughout the civilized world to the same extent as the aseptic ligature. The universal faith in the reliability and safety of the aseptic ligature is only a natural outgrowth of the superior results following its use. Protracted suppuration in wounds the result of retained ligatures, secondary hemorrhage, and suppurative inflammation of vessels, have been gradually diminishing in frequency, and bid fair under the influence of the aseptic ligature to be almost completely expunged from the future category of wound complications. Nussbaum very appropriately remarks: "Catgut is without doubt Lister's greatest discovery." And again: "How pleasant it is to cut the ligatures short and leave them unconcerned to their fate in the wound! In ovariotomies, etc., their value can not be overestimated. The cases in which catgut adheres to an artery, forming connections with it and the surrounding tissues, assisting at the same time in forming a firm ring around the coats of the artery, are exceedingly welcome occurrences, guarding against secondary arterial hemorrhage in ligating in the continuity of a vessel, and rendering even the application of a ligature in close proximity to a large collateral branch void of danger. All this silk can not do." The advantages of the aseptic animal ligature are now generally recognized. Lister's crude method of rendering catgut aseptic has been variously modified during the last quarter of a century. Different methods have been devised and nearly all of the antiseptic substances have been employed in the preparation of catgut. The very fact that so many different methods of preparation have been employed is the very best and most convincing proof that none of them have proved entirely satisfactory. Kocher abandoned the use of his juniper catgut. Carbolized, sublimated and chromicized catgut have been used very extensively, but every surgeon knows from actual experience that not infrequently wound infection could be traced to imperfect sterilization of the material. Dry sterilization of catgut seemed to become the general procedure a few years ago, but extensive trial has shown that it can not be relied upon in rendering the material absolutely safe for practical use. The many failures of catgut as an aseptic suture and ligature, as heretofore prepared, are responsible for the substitution of silk for catgut in the practice of many surgeons. Silk can be readily sterilized by boiling, the simplest and quickest method of effecting absolute sterilization.

The ideal sterilization of catgut consists in rendering the material not only absolutely sterile but also mildly antiseptic without impairing its tensile strength. Every surgeon has been anxiously looking for a method by which catgut could be prepared so that it could be sterilized by boiling without impairing its strength. Fortunately this hope has at last been realized. Experiments have shown that catgut and leather immersed for forty-eight hours in a 2 to 4 per cent. solution of formalin undergo an unknown chemic change which alters their texture in such a way that its tensile strength is not impaired but rather increased by boiling. The commercial catgut is subjected to the action of the formalin without any previous preparatory treatment of the raw material.

Hofmeister, who has done such excellent service in perfecting the formalin preparation of catgut, gives the following most recent method: 1. The catgut is wound on a glass plate with slightly projecting edges, so that the gut is free from the sides of the plate and exposed to the circulation of the boiling and flowing water. The ends of the gut are fastened through holes in the plate. 2. Immersion twelve to forty-eight hours in aqueous solution of formalin 2 to 4 per cent. 3. Immersion in flowing water at least twelve hours to free the gut from the formalin. 4. Boiling in water from ten to thirty minutes. Ten to twelve minutes is amply sufficient, as all microbes and spores are killed by exposure to boiling heat for that length of time. 5. Hardening and preservation in absolute alcohol containing 5 per cent. of glycerin and one-tenth of one per cent. of corrosive sublimate.

Experiments on animals with catgut thus prepared have proved that it is absorbable, though not as quickly as the ordinary material. One of the essential conditions of success in this method of catgut sterilization is to wind the gut quite tightly around the glass plate or hollow glass cylinder during the process of sterilization.

The first attempts to sterilize catgut by this method under my own direction were made at the St. Joseph's Hospital by the sister in charge of the operating room. The result of experience has led us to modify the procedure in several ways. Instead of glass plates ordinary abdominal glass drainage tubes have been employed, upon which the gut is wound quite

tightly. These glass drains have been found an excellent substitute for the plates. An ordinary large test tube would answer the same purpose. The remaining directions given by Hofmeister were followed to the letter. Numerous inoculations with fragments of catgut prepared by this method in sterile gelatin invariably gave negative results. The catgut is as strong as the raw material, hard and the knot is less liable to slip than when the ordinary material is used. We have also ascertained that the formalin catgut can be reboiled almost any number of times without impairing its strength.

Catgut to be safe should not only be absolutely sterile but should contain a sufficient quantity of efficient antiseptic to render it unfit as a culture medium for pathogenic microbes. Hofmeister renders it antiseptic by immersing it in an alcoholic solution of corrosive sublimate. Others have substituted carbolic acid for sublimate. Both of these antiseptics unduly irritate the tissues and increase the primary wound secretion, effects which can not fail in interfering to a certain extent with an ideal healing of a wound by primary intention. The valuable and interesting experiments made recently by Lauenstein leave no doubt that it is almost next to impossible to render the field of operation absolutely aseptic by any of our present methods of disinfection. We are forced to admit that nearly every wound inflicted by the surgeon's knife contains some pathogenic microbes notwithstanding that the strictest aseptic precautions may have been carried out. The experiments made by Ewald have also furnished positive proof that sterile catgut often contains a sufficient quantity of an unknown toxic substance which by its destructive action upon the cells engaged in the reparative process transforms them into pus corpuscles, resulting in the production of a limited aseptic suppuration and the formation of sterile pus. Undoubtedly many of the stitch abscesses which occur in the practice of painstaking aseptic surgeons have such an origin. These experimental researches force upon us the conclusion that catgut should not only be sterilized but that it must be made sufficiently antiseptic to at least inhibit the growth if not destroy the pyogenic microbes which enter the wound during the operation or which may reach it later through the circulation. In this part of the preparation of catgut I have modified Hofmeister's method by substituting for the corrosive sublimate iodoform. After boiling the deformalinized catgut for twelve to fifteen minutes it is cut into pieces of desirable length, tied into small bundles containing from six to twelve threads, when it is immersed and kept ready for use in the following mixture: Absolute alcohol 950, glycerin 50, iodoform (finely pulverized) 100. The alcohol dissolves part of the iodoform. The bottle containing the catgut should be closed with a well-fitting glass cork and should be shaken well every few days to bring the dissolved iodoform in contact with the threads. The catgut can be kept in this mixture for any length of time without losing its strength. One of the valuable properties of iodoform applied to a recent wound is to diminish the amount of primary wound secretion. It does not destroy pus microbes but inhibits their growth. I have used catgut prepared by these modifications of Hofmeister's method with the most satisfactory results and shall continue to use it until some better method is devised.

In conclusion I would advise hospital authorities and surgeons to prepare their own catgut by this or similar processes and not rely upon manufacturers for their supply.

THE OCCURRENCE OF LUPUS VULGARIS IN THE WIFE AND DAUGHTER OF A TUBERCULOUS SUBJECT.

Read in the Section on Dermatology and Syphilography, at the Forty-seventh Annual Meeting of the American Medical Association, at Atlanta, Ga., May 5-8, 1896.

BY JAMES MACFARLANE WINFIELD, M.D.
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Allow me to make a quotation from Kaposi[1] as an excuse for the following paper: "No experimental proof has been offered that characteristic lupus vulgaris can be produced by inoculation of tubercle bacilli. The inoculation of lupus tissue and of the bacilli derived from it has given rise to inflammatory products, but not to lupus, nor has any clinical proof been found, unless we accept extremely careless statements. This is less true concerning a few published cases such as that of Besnier (lupus in a vaccination scar), Sachs (lupus after piercing the ear), etc. These and other similar, although less carefully observed cases, might demonstrate the occurrence of clinical lupus from inoculation of tubercle bacilli."

The cases to be related are not experimental proof, but rather examples of clinical lupus from probable inoculation of the tubercular germ. There is very little, if any, reason to consider one of the cases (the child) to be of spontaneous origin, while in the other there is none whatever.

To make the evidence of inoculation more convincing, a brief history of the tubercular subject will be necessary:

J. C., a native of Ireland; of his family history very little could be ascertained. He believed his father died of consumption. The cause of his mother's death is not known. The same is true of two sisters who died when he was a boy. The patient was a healthy young man. Denied ever having had gonorrhea or syphilis. Married when he was 20 years of age. He drank a considerable amount of intoxicants since puberty, although not to excess until health began to fail, when he was about 25 years old. At that time he noticed shortness of breath and an annoying hacking cough. A year and a half before his death he had an attack of synovitis of the knee, lasting about six months, resulting in a stiff joint. After that his health began to fail very rapidly and he was unable to work at his trade, that of carpenter. At this time the diagnosis of "lung trouble" was made. He gradually became worse until he succumbed, at the age of 32, from an attack of acute pneumonia. According to the statement of his wife, the cause of death on the certificate was pulmonary phthisis and acute pneumonia. During his illness the patient was very careless regarding personal cleanliness. He generally preferred to expectorate on the floor rather than in the cuspidor. He was also in the habit of wiping his lips, after coughing, on the towel used by his wife. These, with other dirty habits, would make the inoculation of tubercular germs very possible; and as the subsequent history showed, there seemed to be no doubt but that this man, suffering from pulmonary tuberculosis, could easily have been the means of inoculating his wife through the medium of a con-

[1] Disease of the Skin, Kaposi.

taminated towel; and also his child, who was creeping about the floor, from the contact with expectorated matter. Twelve years have elapsed since this man died, but there is no doubt about the correctness of the clinical history, as the utmost care has been taken to verify all the facts.

Case 1.—Mrs. J. C., widow of the above, aged 46, native of New Jersey, but of Irish parentage; family history good. No evidence of syphilis or tuberculosis, except that a maternal uncle died at an advanced age of "slow consumption." Personal history: Health always good; married at 22 years of age. She has had three normal labors and three miscarriages, all of the latter resulting from injuries of some sort, the nature of which is immaterial. The first child, a boy, lived to be about 4 months old, when he died from acute enteritis. Second, a girl, died from diphtheria at $1\frac{1}{2}$ years of age. The third, also a girl (Case 2), is still living (September, 1895). When Mrs. C. was about 30 years of age and about three months pregnant with her last child (this being about four years before the death of her husband), in wiping her face with the family towel she rubbed the scab off an insignificant sore on the tip of her nose. This slight excoriation failed to heal and soon assumed a nodular and warty appearance. It slowly spread until all the cutaneous covering of the nose became involved. The accompanying photograph, No. 1, taken January, 1895, shows the amount of destruction present. The center of the diseased area was the site of characteristic irregular scars, while around the margins there were nodules, ulcerated patches and crusts. Bacteriologic examination of tissue taken from some of these nodules, demonstrated the presence of anatomic tubercle and one or two tubercle bacilli. The operation consisted of curettage and cauterization with creosote. After healthy granulations appeared the denuded parts were covered with skin grafts, and a fair result was obtained.

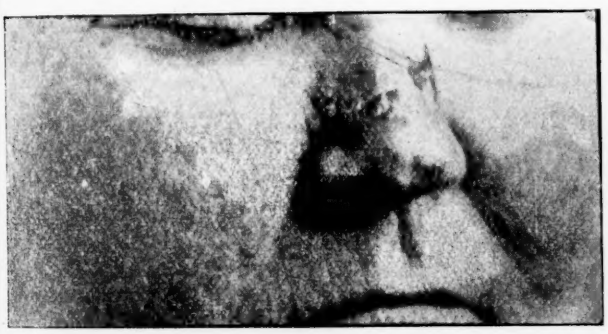

FIGURE 1.

Case 2.—Mattie C., aged 15, native of the United States, last child of Mr. and Mrs. J. C. She was perfectly healthy at birth, remaining so until she was about $2\frac{1}{2}$ years of age, which was two years before her father's death. She then crushed the soft parts of the second finger of the right hand; the bruise and torn skin healed after a few weeks under applications of home remedies; six months later the joints of this finger began to enlarge and finally suppurated. One year after the primary injury, the diseased phalanx and the metacarpal bones were removed. Her health was very much impaired, and in addition to the almost certainly tuberculous finger there appeared an eczematous-like eruption on the ears, eyelids, lips and nose. The remedies applied cured all of the patches except the one on the upper lip; that gradually changed its character, became indurated and nodular, spreading upward toward the nose, and finally destroyed the cutaneous covering and the nasal cartilages. Healing took place in some parts, leaving extensive cicatrices. New nodules were constantly forming, which in turn would break down. For nearly thirteen years the skin affection had never been entirely cured. The physician consulted had treated both mother and child with antisyphilitic remedies, from which no benefit was derived in either case. The tonics given to the child however, improved her general condition. She continued in fair health until puberty, about her fourteenth year. The changes incident to that period seemed to aggravate the lupoid process. At this time, she first came under the observation of the writer. The accompanying photograph, No. 2, was taken before any attempt at operation for the cure of the disease or relief of the deformity was made. As will be seen by the picture, the disease has involved nearly all the cutaneous covering included in a line drawn from below the eyes across to one just anterior to the ears, down to a point over the thyroid cartilage. Much of this area was filled with scar tissue, and in some parts there were numerous bright glistening nodules deeply imbedded in the tissue, some of which had broken down and were covered with crusts. The lips were thickened, the angles of the mouth were obliterated, the mouth itself was greatly contracted. The inside of the lips were filled with scar tissue; the roof of the mouth, the floor of the nares, the pharyngeal vault, were filled with crusts and ulcerated patches. The upper incisor teeth had dropped out, from the destruction of the alveolar process. The bones of the ring finger of the left hand were thickened, presenting all the appearances of bone tuberculosis. The operation (in the latter part of March, 1895) consisted in scraping out all the nodules and ulcerated patches, afterward cauterizing with caustic solution of peroxid of hydrogen. The mother refused to have the diseased finger amputated. The patient made a good recovery and left the city for the summer. In September of last year she submitted to a plastic operation for the relief of the mouth deformity. The finger became more diseased; a sinus had formed, from which necrosed bone and cheesy particles were discharged. The removal of the finger being still objected to, my assistant, Dr. Napier, curetted the sinus and removed all the dead tissue possible, finally packing the cavity with iodoform gauze. The wound rapidly closed and remained so for three months; the face and mouth presented a good appearance; there had been no recurrence of the disease in

FIGURE 2.

the parts operated on in March, although there were three or four nodules over the left temporal region, and one larger in the side of the neck. These were curetted and a plastic operation was done on the angles of the mouth which, when healed, gave her a useful and fairly presentable organ. Physical examination gave dullness in the apices of both lungs with changed respiratory murmurs over the whole left side. About Christmas, 1895, she developed a cough, shortness of breath and night sweats, and lost flesh rapidly; in fact, all the symptoms of pulmonary phthisis were then present. Examination of the lungs showed the presence of a cavity in the left side, and consolidation of the right apex. The face and mouth had remained healed, except that a small portion of the engrafted skin at the angle of the mouth had broken down and was ulcerated. The diseased finger having become a source of great annoyance, on account of the pain and discharge, the patient insisted on its removal. Her general condition being so bad we hesitated about amputating, but finally consented and performed the operation. The amputation wound made a good recovery. Her condition grew rapidly worse, and on the morning of April 10, she succumbed to the pulmonary disease. Autopsy was refused; but from the physical signs there is no doubt regarding the cause of death.

Microscopic examinations of the nodules and portions of the skin removed at each operation, as well as the sputa, showed the presence of the anatomic tubercle and tubercle bacilli, the latter varying in quantities. From the clinical symptoms, the bacteriologic examinations and the ineffectul results of antisyphilitic treatment, there appears to be no doubt of the disease being true lupus vulgaris. The source of infection seems as certain in these cases, as it does in those reported by Besnier, Wolters and others. And as such they may be of some little value in further study of this interesting disease.

NOTE.—Since the above was written Prof. Joshua VanCott has submitted a partial report of the findings in specimens from the cases. He says: "Great difficulty was experienced in getting the tissues (finger) decalcified; but finally sections were obtained which revealed the typical structures of tubercle, many epithelial cells, and small round cells in a connective tissue net-work, with areas of coagulation necrosis and giant cells whose nuclei were characteristically arranged around the peripheral portions of the cells from the findings. I hope to be able to stain the tubercle bacilli" [bacilli were found in earlier specimens.—J. M. W.]. "In the event of not finding them, the histology taken in conjunction with the definite clinical history render it certain in my opinion that these ulcers were tubercular."

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FURTHER OBSERVATIONS ON URTICARIA.

Read in the Section on Dermatology and Syphilography at the Forty-seventh Annual Meeting of the American Medical Association, at Atlanta, Ga., May 5-8, 1896.

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In a paper which I read before the last meeting of this ASSOCIATION in Baltimore I gave the results of some experimental observations on the pathology of urticaria. A brief account of these results would not be out place before discussing the present paper. I mentioned that the cases chosen were those of urticaria factitia. Wheals were produced artificially by drawing down the finger nail sharply over the skin and small portions were excised at definite periods after stimulation, viz., at two minutes, five minutes, eight minutes, ten minutes, fifteen minutes, twenty-five minutes, forty minutes and sixty minutes; the results obtained were particularly interesting in that the whole pathology could thus be followed out in detail. It was found that in fifteen minutes after stimulation a complete picture of acute inflammation of the whole derma was presented by these sections. There was an extensive emigration of polynuclear leucocytes, exudation of serum, small quantities of fibrin, particularly in the neighborhood of the vessels, pronounced dilatation of the lymphatic vessels and a large number of lymphoid (morphologically speaking) cells around the blood vessels, whereas the epidermis remained practically normal.

My present paper concerns observations of three additional cases of urticaria factitia and the examination of spontaneous wheals together with the application of improved technique. In the three cases of urticaria factitia with which I experimented I excised portions of the wheals fifteen minutes after stimulating the skin, because it was found in previous cases that the results obtained were particularly pronounced at that stage. In all three cases the sections showed again the typical picture of acute inflammation of the skin, but some were more pronounced than others. There was not only extensive emigration of polynuclear leucocytes but always an increase in number of the lymphoid cells, and what is rather extraordinary, an apparent increase in the number of the *mastzellen*, which were stained after Unna's method. Other factors present in the sections were pronounced dilatation of the lymphatics, the presence of fibrin and a large amount of serous exudation. Nuclear fragmentation not only of the polynuclear leucocytes was observed, but even of the fixed connective tissue cells, a point which was brought to my attention by Dr. Welch. This phenomenon of fragmentation seems to indicate the presence of an irritant of some kind in the tissues in the area of the wheal.

In connection with the *mastzellen* I used a slight modification of Unna's stain. He recommends that after staining the sections in his polychrome methylin blue solution that they be discolorized with his glycerin-ether mixture. The latter I was not able to obtain, so I used a very weak acid solution of alcohol and decolorized carefully for a few seconds, alternating with water. The results obtained showed a most satisfactory and double staining of the *mastzellen*, the granules of which were red and the nucleus blue.

The observations on the spontaneous wheal of about two hours' duration showed practically the same results in an acute inflammation of the whole derma.

My experimental work on these three additional cases of urticaria factitia and one case of spontaneous wheal have confirmed my earlier observations on the pathology of the wheal, viz., that it is a true inflammation of the skin.

We now come to the consideration of the cause of the wheals, either arising spontaneously or produced artificially, and here a question at once arises, viz.: What is the irritant which causes a wheal to appear and where does it come from? The fact that not only an acute inflammation of the whole derma occurs when a wheal is produced, but that there takes place nuclear fragmentation of the emigrated polynuclear leucocytes and even of the connective tissue cells, clearly suggests that an irritant of some kind must have been brought to this region.

The explanation that it is due to stimulation of the vasomotor nerves is not at all tenable, because the factor of simple dilatation of the blood vessels resulting from stimulation of these nerves would not cause inflammation and certainly not fragmentation of nuclei; neither was the injury produced by the finger nail sufficient to cause these results, as was proved by control experiments in previous cases.

Dr. Welch made a valuable suggestion to me while examining my specimens. He thought that there must be a toxemic condition of the blood at the time wheals could be produced and that some of the toxin was set free into the tissues of the derma, thus constituting a sufficiently acute irritant to set up inflammation with the accompanying marked nuclear disintegration. After due consideration it appears to me that this theory will explain all the phenomena of urticaria and its accompanying wheals, not only in the factitious form, but also in many other varieties of urticaria.

I mentioned also in my previous paper that indican or some of its salts were present in large quantities in the urine of some of the cases of urticaria factitia which I examined, and since this would point to the presence of proteid decomposition in the intestine, it might be possible that the toxin in some of the cases was of a chemic constitution. This theory would also

explain why it is that saline purgatives relieve acute attacks of hives so readily by expelling the toxin poison. It does not necessarily follow that one kind of toxin alone is the producer of wheals, but, as is well known, certain drugs will sometimes produce them, *e. g.*, quinin, tartar emetic, etc., and the decomposition products from certain fruits, *e. g.*, strawberries, etc.

I examined lately a typical pronounced case of urticaria pigmentosa, which I exhibited before the Johns Hopkins Medical Society, and as almost always occurs in this disease wheals could easily be produced. I excised a number of these wheals at certain periods of time, viz., at four minutes, eight minutes and fifteen minutes, as well as a portion of the skin. The results show that even in the eight-minute sections the *mastzellen* were increased in number in the neighborhood of the vessels. This latter observation I should wish to confirm by further experiment before I would give as being final. A few polynuclear leucocytes were also observed and a pronounced quantity of serous exudation.

Unna made the suggestion that the increased number of *mastzellen* found in wheals might come from the blood but he did not prove this important fact.

In conclusion I now quote a sentence from Prince Morrow's system of genito-urinary diseases and syphilology and dermatology (1895) written by Dr. E. B. Bronson, which is as follows: "Though urticaria has been commonly classed with inflammation there is little more reason for this than for regarding a simple rubor or a mechanical edema as inflammatory." I have found, and my statement is supported by Dr. Welch, that in all cases of urticaria which I have examined, eight in number, I have seen a typical picture of inflammation which varied in severity. I have chosen for my work the most pronounced cases because the results were most marked and more easily studied. There is no doubt then that all varieties of urticaria must be classed as inflammatory affections, as Duhring has done in Vol. I of his last addition on cutaneous medicine and surgery.

Unna's theory of spasmodic contraction of the muscular coat of the veins situated in the deeper portions as the cause of the production of the wheal is not at all acceptable and appears distinctly improbable, judging from the standpoint of the causes of inflammation, and also does not agree with my observations, which proved rather the contrary, viz., that the veins were dilated.

EXCISION AND SKIN-GRAFTING FOR TUBERCULAR DISEASE OF THE SKIN.

Read in the Section on Dermatology and Syphilography, at the Forty-seventh Annual Meeting of the American Medical Association held at Atlanta, Ga., May 5-8, 1896.

BY M. B. HUTCHINS, M.D.

ATLANTA, GA.

I have only a few words to say upon this subject. My experience is limited to two cases, and these are naturally insufficient for the formation of an opinion as to the merit of the method. Given a localized tubercular lesion of the skin, of not too great area, the pathologic condition would seem to justify the suggested treatment. Actual metastases, as in "cancer," are not to be expected, neither do we anticipate such an insidious creeping along the lymphatic channels. We do have a localized inflammatory condition, with tubercular structure and usually few bacilli.

The ordinary treatment is slow and generally painful. In lupus vulgaris, especially, the scar often presents a recurrence of the disease. If we can, under thorough antisepsis and asepsis, totally remove the disease, without infection of the wound with the tubercle bacilli, and then by grafting minimize the resultant scar we have a method superior to the old.

Surgeons and some dermatologists recognize the value of excision, but I believe the procedure unpopular with the majority of dermatologists. Thorough excision, with care not to re-infect the wound surface, followed by proper grafting should enable us to end the treatment of a not too extensive case within two weeks. Ordinary methods, especially in lupus vulgaris, often occupy years. White, in advocating excision, says that the bacilli may finally find their way to vital organs if the local disease persist too long. Here it might be asked if the general tubercular condition certainly has its origin from the local lesion or are not all the tissues, in cases ending thus, in so favorable a condition for the bacilli that they receive them just as easily through other channels?

My two cases were treated at my clinic at the Atlanta Medical College. The first was that of a mulatto girl aged 15, with a history of suppurating tubercular glands in the neck, for a year, which finally healed about a year before the appearance, five years ago, of the disease upon the lip. The lesion was upon the surface of the left segment of the lower lip, being about the size of a silver quarter, occupying nearly half the thickness of the lip. It was an ordinary lupus vulgaris, with fine nodules, covered with thin scales, save in the center which was crusted and papular. There was a marked, firm, red, raised border.

The patient was anesthetized and as strict asepsis as practicable was employed. The button "point,' of the Paquelin cautery at a dull red heat was used to cauterize the tissues diseased and kill the bacilli. The entire patch was then carefully dissected away, allowing sufficient margin of healthy tissue, and to the depth of about one-half the thickness of the lip. Small grafts were then taken from the previously prepared thigh, and properly applied. About 80 per cent. of these lived. A few more grafts were applied two weeks later, to points left vacant by the slipping of some of the first. The success of the treatment was vitiated by some error in asepsis in later dressings. After some weeks a faint vesicular point was noticed at the inner edge of the healed surface, but this soon disappeared spontaneously. There was also a tendency to keloidal growth of the cicatrix, but secondary contraction soon relieved it.

My second case was that of a white boy of 12 years, in a poor general condition. Occupying the dorsum of the right wrist was an oblong, transverse, flabby, irregular ulcer with an unhealthy base and soft, indolent, pale, undermined edges—in short, the lesion formerly described as a scrofuloderm. I believe the duration of the disease was over a year.

Under anesthesia and with asepsis, a free incision, well outside the margins of the lesion, ovally, without lifting the knife, was carried around the diseased tissues. A clean dissection was then made from the annular ligament, care being had not to allow the lesion, or anything which had been in contact with it, to touch the wound. Large grafts were shaven from the skin of the thigh and applied in the usual manner. The grafting was a failure, but a good, flexible scar was obtained. In addition to the usual dressings, a splint was used to restrain motion.

Inability to see or hear from my patients directly, prevents my reporting their present condition. The first case seemed cured when seen two or three months after her discharge; the second is said to have had a "recurrence" in the scar.

My two cases simply demonstrate what I believe to be the proper method of operation, while they also constitute a warning as to the absolute necessity of thorough asepsis both at the operation and in the after-dressings. The second case also needed considerable preparatory treatment, which our haste to operate too often causes us to neglect.

Excision without grafting is not so promising as the two combined, but perfect technique and extreme care in the later dressings would obviate much of the danger of future trouble in the cicatrix. We hope with grafting to get a minimum of granulation, and, later, scar tissue, which offers a minimum of liability to recurrence.

The cutaneous tuberculoses being now classed in one group, we can well generalise in their discussion, with a special allowance for the marked tendency of lupus vulgaris to return in its scar tissue.

NOTE.—The lupus patient was seen a few months after this paper was read. A young brother had died of tuberculosis meanwhile. The site of operation showed entire cure of the lupus. The cicatrix was still a little nodular and pigmented, though smoothing and whitening at edges. The fine hair included in grafts from leg had become long and coarse. She declined their removal by electrolysis. The final result in this case is satisfactory.

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SYPHILIS SUCCESSFULLY TREATED BY HYDRIATICS.

Read in the Section on Dermatology and Syphilography at the Forty-seventh Annual Meeting of the American Medical Association at Atlanta, Georgia, May 5-8, 1896.

BY ELMER LEE, A.M., M.D., PH.B.

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There is, perhaps, no disease whose character is so black, and whose ravages are so universally distressing as that under consideration. The name syphilis strikes terror into the soul of its victim, and measureless encertainty in the mind of the professional attendant upon whose shoulders the responsibility of treatment is placed.

The exact origin of syphilis is uncertain. The records do not clearly establish by whom or at what time in the history of the world the disease was first discovered. There has been much discussion concerning this point, but little satisfaction has resulted. It is the common habit of Europeans to associate the disease with the return of the followers of Columbus, in 1493, from their discoveries of the West Indies. However this may be, without the shadow of a doubt, the same disease must have existed centuries before among the races of the Orient. The first record of syphilis in France dates only to the siege of Naples, in 1494.

Syphilis is spread by direct contagion upon an abraded surface or a breach in an exposed membrane or tissue, and thereby contaminating virus enters the system. A period of variable duration between the inception by contact and the lesion follows. It may be a few days, or it may be weeks before the systemic exhibitions appear. Two reasons may be assigned for the variability of incubation, viz., the virility of the poison and the susceptibility of the individual. As in other diseases, there are some people insusceptible to syphilitic virus.

The precise nature of the infecting virus has eluded the researches of scientific processes of determination. It is an open question whether the serious poisoning which results is caused by a direct entrance of the contagion into the circulation or whether it is by reason of the secondary absorption of the product of the initial ulcer. For my part it is not possible to decide the question, but fortunately the practical treatment of the disease does not depend upon this mooted point. The answer to the problem is, probably, that both influences together produce the result.

The first manifestation of syphilis appears in the form of macule or papule upon some mucous or skin surface. The lesion may extend quickly to the deeper tissues and viscera. During the period of healing of the initial lesion the disease is regarded as in the first stage. The subsequent appearance of surface and other lesions constitute the second period of syphilis. If there are still subsequent exhibitions at some later time, usually measured by years, such a manifestation establishes the third period of the disease.

One invasion of the body generally precludes a second. The disease may be transmitted by the secretions of a sore upon any part of the body within and during the earlier stages. The power of transmission during the third period of the disease is regarded as unlikely, although there are some differences of opinion on this matter. It is, further, reasonably decided that the normal secretions of the body, such as saliva, mucus and other fluids do not transmit the disease. But in the first stage of syphilis the blood as well as the material from the initial lesion may infect another person. Some investigators have asserted that a germ has been found constantly associated with the blood during the earlier stages of this disease. This position can not be accepted as it has not been substantiated. As in some other diseases, the symptoms of this are similar to those of certain other forms of toxemia. But it is undoubtedly true that syphilis is due to a definite and specific contagion. The blood is poisoned thereby and a series of mild or severe disturbances of the health ensue in a somewhat regular order. The principal changes that occur, according to Virchow, begin by the production of a small-celled solid growth, which at first resembles granulation tissue, but which soon shows a vesicular occlusion with consequent degeneration. This statement is, to me, one of the most important in the pathology of syphilis. If studied according to the light of experience and analogy it has the significant indication pointing out the requirements for treatment. Variation in the caliber of the minutest channels through which the circulation is carried forms the earliest pathologic manifestations in internal diseases. The recognition of this fact is of the greatest significance in the direction of a correct understanding of the truth concerning pathologic conditions. Alterations in the size of the vesicular spaces produce either congestion or hyperemia, either state producing destructive changes in the delicate cell structures. Should the disturbance in the circulation occur in the cells of a vital organ the influence upon the whole body will be proportionately serious. If at the same time the resisting power of the general system as well as the special locality in which the lesion occurs should be of low

vitality, great structural changes necessarily occur within short periods of time.

In the treatment of syphilis there is always one imperative indication, namely, sustaining the natural resisting forces against auto-infection. Upon the weakened and demoralized system disease preys rapidly and furiously. It is more important to preserve the integrity of the individual by supplying it with natural nutrition and relieving it of the occlusions in its neighborhood than it is to attempt to overwhelm the circulation by some extraneous and poisonous material with the view of neutralizing a virus of disease. It is a serious question whether an organic or inorganic chemic substance pervading any part of the living tissue structures, is able to be neutralized by the introduction of another chemic agent. The various organic aud inorganic matters used for the treatment of syphilis is based upon the supposed property of a matter to destroy or antagonize another. It is easy to produce a definite reaction under favorable conditions in a physiologic or chemic laboratory when we know the exact nature of the materials with which the experiment is conducted; definite reactions, however, in living structures are not possible.

The influence upon the contagion which enters the circulation from without, by the fluids and solid elements of organized living tissues, can not be definitely determined by scientific methods. Moreover, when a given mineral or vegetable reagent enters the stomach, and during its passage through the system, it is lost to the senses of the scientist, consequently whatever reactions there may be are determined by no reliable data. It was recently stated by a clinician who gives nearly all his time to the treatment of syphilitic manifestations, that up to the present moment the materia medica offered but two agents with which to control the symptoms of this disease. Fortunately, indeed, it would be did the materia medica possess so many as two remedies which could, in truth, cure syphilis. Every physician whose experince has been even moderate, knows that mercury and iodid of potassium are not able to cure syphilis, all that may be said to the contrary notwithstanding. The philosophy of a cure of the impaired tissues by further impairment of that tissue is allopathy, but it is not true to nature. It is necessary to do more than conform to the theory included within the confines of a name. Syphilis is not curable by the alleged principles of "allopathy," or the infinitesimal folly of homeopathy, or by the vagaries of the eclectics. If the disease is curable the remedial forces of that inherent tendency for good which resides in every vegetable and animal cell are able, when properly aided, to conquer against its enemies.

By reference to one of the most recent reviews concerning the latest improved treatment of syphilis, the following remedies are advocated as essential: The list comprises blue pill, gray powder, gentian, quinin, iron, opium, alum, chlorate of potash, jalap, gamboge, epsom salts, green iodid of mercury, perchlorid of mercury, iodid of potassium, perchlorid of iron, red iodid of mercury, tannate of mercury, sarsaparilla, antimony, aromatics, iodid of sodium, iodid of ammonium, carbonate of ammonia, tartarated iron, bitter infusions, arsenic, iodid of mercury, iodoform, bromid of potassium, bromid of sodium, bromid of ammonium, strychnin, cod-liver oil, mineral acids, vegetable bitters, sulphur, calomel, black wash, carbolic acid, ointment of ammoniated mercury, ointment of oxid of zinc, mercurial ointment, mercurial vapor bath, borax, chromic acid, permanganate of potash, iodoform ointment and atropin. Of this bewildering array of anti-syphilitic soldiers, how is the young doctor to discover who is general and which are privates? The life of the doctor is too short to examine each remedy and calculate its value. The numerous remedies really constitute a disadvantage to the patient as well as to the doctor. The choice of the materia medica will be determined very largely by the number of years since the year of graduation. The lectures emphatically encourage the necessary use of mercurials, and with this recommendation in mind the young medical man feels consciously strong in his ability to treat syphilis. He is encouraged to think that while there is difference of opinion concerning the use of medicines in the treatment of whooping cough and measles, that the profession is a unity in its approval of mercurial treatment of syphilis. When a few cases have been entrusted by chance or some other influence to his care, doubts will come into his mind and his security will be undermined. In what way is syphilis pathologically and radically different from other functional and organic diseases that it may not be cured? There are conditions which we frequently see that are quite incurable, both in this and in other diseases. The degenerate tendency becomes stronger than the resistance of the cells can endure and the natural termination of such cases is fatal. Other cases are incurable because of the utter wilfulness and disregard of reason by the patient.

The experiences of the profession clearly show that the natural termination of this disease is toward recovery. The disease may be light or otherwise and in either case complete restoration often takes place, either with or without professional treatment. It would seem to show that if a single case of either mild or severe syphilis recovers without treatment, that the restoration is solely due to the principle of inherent preservation of cell integrity through a natural agency. My line of experience has taught forcibly the lesson that vitality maintained through physiologic and hygienic management is a scientific, a safe and satisfactory treatment of syphilis in the earlier stages. In the last stages, when the forces of life are sadly weak and declining, it is worse than useless to hope for honest relief through the administration of organic and inorganic substances. It is, perhaps, rash to controvert the position of the general profession in its attitude favoring the use of mercurials in the treatment of syphilis, and it would have been unnatural to an orthodox medical education prior to the last third of my medical career. But it matters not, rash or otherwise, the only concern of the physician is to know the truth, and if syphilis can be successfully treated by hydriatics, is it not a worthy triumph? The treatment of syphilis by water as the principal remedial agent, is not so simple or so well known as the agent itself would seem to indicate. Neither is the method mysterious or devious. But it must be mastered and experience will teach more than may be learned from a study of the brief literature on this subject.

My attention became attracted to hydriatics, as a successful method of treating syphilis, through the necessity of personal responsibility in the treatment of this disease. My position has been gained by actual clinic experience.

There came to my office in the spring of 1895 a negro, George F., age 25, single, waiter, who applied for relief on account of phimosis. The symptom which led him to consult me was inordinate accumulation of smegma. Circumcision was done and the case disappeared from my observation. Perhaps a month later the patient appeared again to exhibit an ulcer located on the dorsum, at the point where the division had been made. This ulcer was enormous before it healed and was characteristic in every particular. Finally it healed and some weeks subsequent to its cicatrization the negro returned with unmistakable secondary symptoms of syphilis. The rash was typical, the knees and ankles were swollen and painful and the indications upon the exposed mucous membranes were indicative of contagion poisoning. The treatment was instituted from the inception of the diagnosis. The case was seen by several experienced confrères and the plan of management as outlined was followed by them as well as by myself. The agreement in diagnosis was emphatic. Water was the remedy prescribed in regulated doses to the extent of between two and three liters per day during a period of between eight and ten months. In each glassful of water some harmless dose of medicine was incorporated for the purpose of producing the desired mental effect upon the patient. The agent used for this purpose consisted for the most part of one or two drops of carbolic acid to six or eight ounces of water, which was altered in color each time the prescription was refilled. The dose from the bottle was a teaspoonful to be mixed with the portion of water which was to be taken at definite intervals during the day. There was a period of two weeks, during the second month of the treatment of the disease, when the young man was unable to work on account of the unsightly appearance of his face and hands, as well as the general discomfort from which he suffered. The symptom which remained the longest was edema of the ankles. It has, however, entirely disappeared at this time. The symptom of next longest duration was the raised patches, some of which broke down, covering the unexposed surface of the body. The negro at this time is free from any discoverable lesion or symptom of syphilitic sequelæ. The skin is smooth and the discolorations have practically disappeared. The case has frequently been observed by several physicians, and at the last visit to my office he was pronounced cured so far as symptoms could be discovered.

During the winter of 1894–5 a woman, Lizzie B., single, 26 years old, fair, a stenographer, presented an ulcerated throat. The case was not suspicious and the ulceration was considered benign; simple treatment was begun. A few weeks later she complained of vesical hemorrhage. Examination revealed erosion of and an ulcer upon the inner surface of the anterior lip of the cervix. The case was immediately suspected to be a contagious disease. At that time no personal interrogation of her previous conduct took place and for a period of several weeks the case was observed and the diagnosis gradually and emphatically determined to be syphilitic. Soon after this determination she was confined to her bed with a fever and during this time secondary eruptions manifested themselves in the form of papules. They broadened and extended over the whole body. The hair fell out in considerable quantities. Her treatment, with the exception of local applications to the cervix, was directed in the same general line as in the preceding case. The patient, however, during all this period of treatment, which covered perhaps ten months, regularly added teaspoonful doses of the scented and colored water from the druggist's prescription bottle to the doses of water which were given her at stated intervals, and in sufficient quantity, during each day of the ten months. In addition to internal hydriatics, the bowels were irrigated daily during a period of the first three months of treatment. Subsequent to that time, irrigation was performed at intervals of once each week. The recovery of this woman is satisfactory to herself and no physical symptoms of syphilis can be found.

The local treatment consisted principally of hydrozone applied in full strength to the chancres in each case. The surface eruptions on the skin were anointed with a liquid soap, which was rubbed in till it was dry and allowed to remain until washed off at the bath on the following day, to be again rubbed in as before.

In conclusion, the heralded treatment of syphilis at water cures, such as Hot Springs, Ark., and other places of the same character, are, in my opinion, dependent upon the quantity of water which is used internally and externally, and not upon the quality. Furthermore, the relief of the symptoms is dependent upon the large and regularly used internal hydriatics, and not upon the morbid effects produced by the mineral and vegetable materials which are administered in enormous and destructive doses. By reason of the preservation of the functions of the vital organs, through the internal use of water and the external baths, nature withstands and permits the awful abuse to which it is subjected by the tons of mercury and the barrels of iodid of potassium that are imposed upon credulous patients.

103 State Street.

A PLEA FOR CONSERVATIVE TREATMENT OF CARBUNCLE.

Read in the Section on Dermatology and Syphilography, at the Forty-seventh Annual Meeting of the American Medical Association, held at Atlanta, Ga., May 5–8, 1896.

BY W. E. SHAW, M.D.

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In these days of neophilism, I feel that an apology is due for presenting so apparently threadbare and homely a subject as the treatment of carbuncle, for there are few subjects upon which the text-books are in such near accord as in the treatment of this disease. Nineteen out of twenty articles mention as the chief means of combating this disease, incision, caustics, total excision, curetting and poultices, etc., when the disease is of any severity. This paper does not consider the treatment of anthrax.

The histories of two cases recently related by a medical friend, with those of three others of which I was informed during the last year, one of which was fatal, all five threatening life, deepened the impression formed several years ago, that the knife or caustics should very rarely, if ever, be used in the early stages of carbuncle. These facts, with the experience that I have had recently with a case of severe carbuncle of the lip and cheek in a very feeble subject where the more conservative methods were used, and because the patient recovered without a noticeable scar, made me still more strongly in favor of con-

servatism. After having my attention again called to this subject, I turned to the article on carbuncle in Prince A. Morrow's exhaustive work, and there found what I suppose to be the latest statement of the management from the surgical standpoint, from which I quote. The author says "there are only three methods which wholly commend themselves to the surgeon of today, treatment by incision, by total excision and parenchymatous injection." After describing the mode of incision and curetting he says: "The relief that follows the operation is immediate. The patient feels better. The temperature may fall to normal."

After describing the method of complete excision of large carbuncular masses, in which we know the hemorrhage is apt to be severe, he says: "The relief following the operation is instantaneous and marvelous. The temperature sinks at once, the pain ceases absolutely, the patient, who may have been in a state of delirium and sopor, recovers his normal condition in a few hours."

If we go back for a century and examine what has been written on this subject, we find the same fundamental ideas governing the majority of writers, viz., that carbuncle is a malignant thing, out of which can come little or no good tissue. This has been the basal thought in treatment. The operative technique has been greatly improved by the advances along the line of asepticism.

In opposing operative measures as a rule and making it the exception, I am offering nothing new, for there has been for many years past occasionally a surgeon who would have the temerity to depart from the beaten path and advise conservatism.

I believe that the wonderful results accomplished in these latter days under aseptic surgery, have had a tendency toward causing surgeons to depend too largely upon the brilliant and spectacular results of the knife, and too little upon the slower and less impressive methods of nature. Fame is relished by all, and it may be at times difficult for us to resist the temptation to cut the Gordian knot and thereby gain the plaudits of the crowd, even though worse for the patient. I believe that a conservative feeling in regard to the treatment of carbuncle is more widespread than works on surgery would indicate, but the weight of these articles, and the practice of the surgeons who wrote them, throws the majority of the best opinions upon the side of positive methods. As most of the severe cases of carbuncle, in cities at least, are seen by surgeons in consultation, the treatment is largely guided by surgical specialists. When a surgeon is called in consultation, the very circumstances largely demand that something decisive be done, and with such abundance of authority, in the same direction, it is no wonder that the apparently slower method should be placed at a disadvantage. I have not made an exhaustive examination of the surgical literature on this subject, but have found only three strictly surgical specialists who decidedly oppose the surgical tendency. Ashhurst, after naming these older methods, says "it is not proven that any of these methods are effective either in limiting the extent or duration of the disease." Walsham, 1887, says "that the crucial incision and caustics were formerly favorite practices, but the majority of surgeons now use expectancy." Moullin, 1891, says "that the old free crucial incision is pretty much abandoned, and strongly condemns poultices, which have a tendency to increase the trouble." The article which made me a convert to conservatism was read before the AMERICAN MEDICAL ASSOCIATION in 1885, by the honored president of this Section. The cardinal principles Dr. Bulkley laid down in this article were, 1, careful avoidance of all irritation of the carbuncle by applications or pressure; 2, avoidance of hot or moist applications during the whole course of the disease; 3, avoid incisions and caustics, leaving the whole process of opening and discharging to nature; 4, avoid stimulants unless absolutely necessary to sustain life; 5, protect the inflamed surface from first to last with a soft ointment, preferably one containing ergot and oxid of zinc spread thickly upon lint, changing as often as required; 6, administer ¼ grain calcium sulphid every two hours, from first to last; 7, support the patient, not by stimulants and medicine, but by placing him under the best possible hygienic surroundings; 8, remedies: Occasional laxative Dover powder if necessary, and a mixture containing mag. sulph., ferri sulph. and acid sulph. in water after each meal.

These principles appear perfectly sound, especially in so far as they caution non-interference. Some one has aptly said "that the wise man is he who knows when to stop," and it has often occurred to many of us that our profession, which is rushing along under the stimulating impetuosity of the age in laudable efforts to discover something new, is frequently, under the guidance of our noble and enthusiastic advance guard, led to conclusions and carry out practices which are to the detriment instead of the advantage of the patients. I am as firmly convinced that the early excision or incision or caustic destruction of every carbuncle is wrong practice, as I am that bleeding to syncope would be wrong in any case of pneumonia. I know not how much virtue there is in calcium sulphid in these cases, but many cases of disease, where there is tendency to suppuration, do well under it, and I shall use it until I find a better remedy. I do not place great weight upon any special formulæ that Dr. Bulkley or I may have used either internally or as a protective ointment. I believe they have virtue, but the greater benefit is that of excluding meddlesome interference and giving the great physician, nature, a chance to assert herself.

Many times when perplexed, I have turned with profit to a little book, a towering monument to the genius and discernment of John Hilton, "Rest and Pain." Hilton speaks in this book of cases of carbuncle that were not progressing satisfactorily under the care of eminent London surgeons, where a speedy termination was secured by neat adjustment of the parts, a cotton wool compress and so bandaged as to keep the parts at rest. I have treated about a dozen cases by this method, but will report only four because of their greater threatened severity in the beginning and the good results following the treatment:

Case 1.—Mrs. J., aged 35, a German housewife of moderately good health, had been suffering with a swelling on the back of her neck for a week when I saw her, Nov. 8, 1885. The swelling extended from the angle of one inferior maxilla to the other. In the middle the carbuncular mass was 3½ inches in width and there was at least 18 square inches of tissue involved. The swelling was very dense, dusky red in color and exceedingly painful. Within a diameter of 2 inches there were five or six pustules which had the appearance of beginning sloughs, that would in a few days communicate with each other. The temperature was 102 degrees, and the general constitutional disturbance was affecting her strength. No albumin or sugar in the urine. She was given the treatment advised by Dr. Bulkley, and during the next week the swelling remained about the same, but she was more comfortable. At this time she was seen by my friend Prof. P. S. Conner, who advised poul-

ticing, which I reluctantly carried out for two days, but as they were troublesome and no seeming benefit was obtained, I abandoned them, and again used the ointment. Two days afterward, as there appeared some deep fluctuation, an incision not more than three-fourths of an inch wide was made through the dense leathery mass, and about one ounce of pus discharged. The original treatment was continued and there was not the slightest slough around the wound nor extending from the pustules, although it was about six weeks before the induration disappeared.

Case 2.—Chas. W. G., aged 40; American, of good personal history, but had suffered several times during the previous six months with ague. When I saw him he had been under the charge of another physician for a week. The induration extended from ½ inch to right of median line to angle of left inferior maxilla, about five inches, and was 2¾ inches broad at widest point. There were between 8 and 9 inches of surface involved. There were eight pustules and the appearance was threatening. The treatment was about the same as in the former case and he was discharged November 30. He suffered very little during the last weeks, and there was not the slightest sloughing.

Case 3.—Chas. S., aged 20, a feeble German with incipient phthisis. He had worked as glue maker until the previous evening, although he had felt a painful swelling for three or four days, increasing in size and painfulness, on his neck and extending to angle of left jaw. The swelling was 4 by 2½ inches in extent. There were four well-marked pustules about the middle. Within a week there were about a dozen pustules, but they dried up, only extending through the thickness of the skin. He was able to resume his work at the end of three weeks. No sloughing.

Case 4.—Jno. L., aged 55, a teacher by profession. He had suffered greatly with insomnia for several years. His nervous organization had been greatly shattered by dissipation, but for the last four years he had lived a temperate and correct life. For several weeks preceding this attack he had felt very much debilitated, sleeping very little except when under the influence of anodynes. I saw him Sept. 14, 1895. He said he had been suffering with a "boil" at edge of nostril for nearly a week. For two days he had fever and chilly sensations. No appetite, foul breath and badly coated tongue. Temperature 100 degrees. On examining the lip, which was nearly an inch in thickness and very dense, I found there were four pustules nearly communicating. The mustache was closely clipped and an ointment of acetanilid, balsam Peru and zinc ointment applied. Calcium sulphid, gr. ss. every two hours (the dose I gave in all four cases), and phosphate of soda given as a laxative. This treatment, with trional occasionally as a hypnotic, was continued through the whole course of the disease. At the end of a week the induration and swelling had extended, closing the left eye. There were ten threatening pustules, two on edge and two on the under side of the lip. About one inch in width of the lip seemed to be perfectly honeycombed with bands of necrotic tissue, and hope of saving the lip was almost abandoned. After several days the swelling began to subside. The gangrenous strings began to separate and were removed, and by the end of the third week the lip was perfectly healed.

I have treated quite a number of carbuncles of less severity by this method, and with satisfaction. I do not think it can be doubted by any one that these four cases were severe, sufficiently grave in the beginning to give the treatment a severe test, notwithstanding the fact that none of them were diabetics. I thought that each one demanded my best efforts, and had I seen them before being converted to the more conservative method, I am sure that they would have fared much worse under the knife or caustics. The treatment of any case of carbuncle will vary in the minutiæ according to the patient's individual condition. My experience compels me to emphasize a few "don'ts:" Don't cut, scrape, burn, poultice, chill with ice, blister or irritate in any way, but gently protect the part with some soft antiseptic ointment, over which apply a soft cotton compress. If sloughing supervenes, do not destroy any sound tissue, or cause any hemorrhage in removing the dead tissue, but support the flaps as advised by Hilton. Give calcium sulphid, in ½ grain doses, every two hours.

Let us have a Department of Public Health!

A FATAL CASE OF MULTIPLE SUBCUTANEOUS GUMMATA.

Read in the Section on Dermatology and Syphilography, at the Forty-seventh Annual Meeting of the American Medical Association, at Atlanta, Ga., May 5-8, 1896.

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The so-called tertiary lesions are not a necessary consequence of the syphilitic infection. They occur according to Finger's statistics, only in 5 to 40 per cent. of the cases; and Haslund, Mauriac and Neumann give the still lower figures of 5 to 15 per cent. No case of syphilitic infection is, however, safe from the possibility of their occurrence; and the length of time that has elapsed since the commencement of the disease is no guarantee against their appearance. Fournier reports a well authenticated case occurring fifty years after the initial lesion; and tertiarism appearing ten or fifteen years after the sclerosis is not uncommon. The average and most common time, however, is five years. On the other hand, they may appear quite early in malignant syphilis; Mauriac reported a case in which gummata occurred a few months after the infecting chancre, forming what the French call *syphilis maligne précoce*, or lues maligna. We are as absolutely ignorant of the reason for these differences, as we are of the causes of tertiarism in general. Apparently, it is entirely a matter of chance, and bears no relationship whatsoever to the severity of the original disease. It is not proven, as claimed by some, that improper treatment, or the want of treatment, or chronic alcoholism, or the presence of any debilitating disease, has anything to do with the occurrence of the tertiary phenomena.

The gumma is the characteristic lesion of tertiary syphilis, and it originates always in the connective tissue. It may appear in the skin, the subcutaneous tissue, the periosteum, the bones, the muscles, the mucosæ, or the parenchyma of the internal organs. It is most common, however, in the first two situations; and Neumann has shown that, of all the disease products of syphilis, those of the skin and its adnexa are the most permanent and refractory.

Anatomically considered, the gumma can not be distinguished from the tubercle and papule that mark the earlier stages of the disease; but clinically they are quite distinct. The gumma, like the tubercle, is composed of a dense, small-celled inflammatory infiltration, with a great tendency to peripheral growth. Like all similar neoplastic structures, these cells possess little vitality; the central and oldest ones, being furthest removed from the vascular supply, soon die and begin to undergo retrogressive changes, fatty, caseous and calcareous degeneration. The cell mass grows at the periphery, causing, by pressure, death of the cells of the tissue invaded; while the central portion softens and degenerates. A limit to its growth is, however, finally reached; the peripheral cells become organized into connective tissue and form an envelop for the mass; the central semi-fluid portions are absorbed or voided; the capsule shrinks; and a fibrous nodule with chalky or cheesy contents is left behind.

In the skin the gumma appears as a circumscribed brownish-red, hard, elevated nodule. It frequently occurs in groups arranged in circinate or oval forms. The mass grows steadily for a time, and may attain the size of a quarter of a dollar. It may then be

resorbed without liquefaction; or it may slowly soften and break down. A scaly crust forms over its center, on the removal of which a yellow or sanious glutinous fluid oozes out, and a deep irregular ulceration is revealed, covered with honey-like secretion and detritus. If the necrosis is slow, the softened matter under the epidermis raises it into a pemphigus-like bleb; if the secretion dries rapidly as the ulceration spreads, ecthyma or rupia, or an ulcerative serpiginous tissue destruction is set up.

The subcutaneous gumma begins in the cutis or subcutis as a small lentil-sized mass with intact and movable skin over it. The integument is not primarily affected. It slowly grows to the size of a walnut, and gradually invades the skin, binding it to the connective tissue below. The pale skin becomes pink, then red, and finally livid. As the center of the gumma softens, fluctuation appears, and the infiltra-

FIG. 1.—Multiple subcutaneous gummata, posterior surface right ankle. Cast from life.

tion closely resembles an abscess. Years ago I made the mistake of opening a large gluteal gumma under that supposition. But even when unopened, pressure and invasion finally cause necrosis of the skin. It breaks and the contents of the mass, a small quantity of bloody, sticky, honey-like fluid is expelled. The skin around the opening breaks down, and we have finally a round gummatous ulcer, with an undermined lardaceous border and a hard necrotic base.

The shape of the subcutaneous gumma is round or oval, depending on the anatomic structure of the part. On the fingers and toes it is elongated; in the general subcutaneous connective tissue, round as a ball. Its size is usually small, though Fournier records one that measured 14 by 10 centimeters; and Mandeville, one that reached from the orbit to the neck, and from the nose to the occiput, covering the lower half of the face and the upper half of the neck, and 5 centimeters in height. In the case that I am about to report, one gumma at least was 7 inches in diameter. The localization is usually symmetrical. The head, neck, shoulders and limbs are most frequently the site of the growths; but they may occur anywhere.

The number of gummata present at one time is usually not greater than one to six, Joseph says one to three. The more numerous they are, the smaller their size. Mauriac says that more than a dozen is very exceptional; and Cazenave's case with 50, Kaposi's with 50 to 100, and Lisfranc's with 160 gummata are rare and isolated cases. In my case there were over 50 tumors.

Subcutaneous gummata are rarely attended by any marked constitutional symptoms. Mauriac reports one of the anterior border of the masseter that prevented the patient from swallowing, and, by compressing Steno's duct led to the formation of a salivary fistula; and Ricord notes crural and cubital neuralgias from gummatous pressure. Usually, they cause no general symptoms at all, and the patients apply to us to be relieved from a disgusting and annoying sore. I have not been able, in the literature that is at my disposal,

FIG. 2.—Multiple subcutaneous gummata. Photographed on admission.

to find a case where death occurred from cutaneous gummata without the presence of any other complicating disease, and in this respect, as well as in regard to the size and number of the tumors, the case recorded below, while not unique, seems worthy of attention.

Charles L., aged 22, admitted to Lebanon Hospital, Feb. 6, 1895. The family history, so far as it could be obtained, was entirely negative. No personal history of syphilis or tuberculosis could be obtained.

The patient came to be treated for a number of tumors on the legs and the forearms, which, he said, first made their appearance six or eight weeks before. They grew very rapidly, especially lately.

Nothing abnormal was found in the internal organs; but the external surface of the body presented a striking picture. From the instep to the knees, and from the wrists to the elbows, the surface was practically covered with a succession of tumors. These tumors were more or less similar in shape, being oval, fusiform or orange-shaped, but varied greatly in size. The smallest ones were the size of a chestnut; the largest were as large as an orange. They were mov-

able, not painful and only the largest were tender to pressure. The smallest were firm to the touch, and the skin over them was movable and but slightly reddened. The medium-sized ones, which projected about half an inch above the surface, were softer; the skin over them was more or less pinkish or glazed, and adherent to the surface of the tumor. Over the large ones the skin was of a livid dark-red hue; and over the largest it was ulcerated and bathed with a thin secretion, the surface covered with very pale granulations, and discharging a sanious sticky fluid.

In all, there were over fifty tumors, varying from 1 to 6 inches in diameter. The largest were situated above each ankle, three on one side and two on the other in corresponding situations and each leg had in addition ten to twelve smaller ones. On each forearm were twelve or thirteen, mostly smaller than those on the legs.

The patient's general conditon is bad, he was ane-

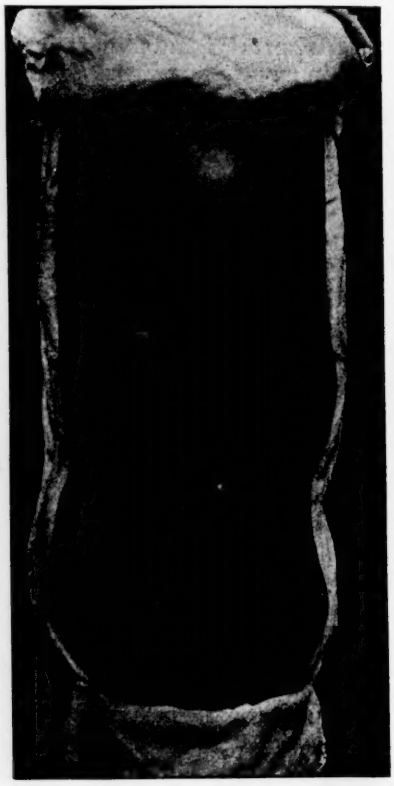

FIG. 3.—Multiple subcutaneous gummata, right forearm. Cast from life.

mic and emaciated. He had some fever, but there were no symptoms of disease about any of the internal organs. He was put on a vigorous anti-luetic treatment, and this was persisted in with but few intermissions until August 2, the date of his death. It consisted chiefly of mercurial inunctions, the use of the iodids in as large doses as could be borne and the dressing of the opened gummata with antiseptics. On March 19, he was taking 150 drops of the saturated solution of iodid of potassium, three times daily. While no new gummata appeared, the smaller ones continued to increase in size and the larger to break down. The following extracts from the bedside record will show the steadily downward progress of the patient.

March 28: Takes 150 drops of the saturated solution of the iodid of potassium three times daily; one mercurial inunction daily; the bichlorid 1-5000 dressing is changed to iodoform. Evening temperature 103.

March 30: Two more gummata on the right ankle and one on the left ankle are beginning to break down.

April 2: Is taking 210 drops t. i. d. The ulcerated gumma bleed freely when the dressings are changed. They extend almost entirely around the ankle. Two more large and several smaller ones are commencing to break down. The discharge is profuse and foul and it soaks through the dressings though they are changed several times daily.

May 29: The patient's strength is diminishing fast, in spite of tonics, extra diet, wine, etc. He has lost his appetite and sleeps badly; is inclined to be somnolent during the day. The ulcerations seem more painful and it is impossible for the nurse to keep them clean. Maggots have appeared in the largest one and the stench is almost unbearable. The bichlorid dressing was returned to, but without effect;

FIG. 4.—Multiple subcutaneous gummata, left forearm. Cast from life.

then as strong solutions of permanganate of potash, creolin and other antiseptics as were safe, were employed. These measures had little effect on either the fœtor or the larvæ. The largest of the ulcerated masses now measures about eight inches across. At this period the casts and photographs were taken.

June 8: Patient developed a diarrhea and the iodid of potassium, of which he was now taking 720 grains daily by mouth and rectum, was discontinued. He was given the iodid of sodium, 45 grains daily, afterwards increased to 180 grains daily. The diarrhea was treated with lead and opium pills, starch and laudanum injections and the nitrate of silver.

June 19: Patient's diarrhea is better.

June 24: Patient's general condition is so bad that all medication, save strychnin and tonics, is discontinued. The only food that can be administered is milk punches, of which he takes six daily. The

evening temperature is 102 degrees. He lies in bed all day, apathetic and somnolent.

July 10: Diarrhea has returned and is refractory.

July 27: Diarrhea still continues. Temperature subnormal; 96 degrees P. M.

August 2: Death.

Here, then, is the record of a case of syphilis of the old-fashioned variety, a kind that, luckily, we see very little of today. It is the true *lues maligna*, the syphilis that in the middle ages devastated Europe and that in more modern times has ravaged the Sandwich Islands and Africa. Such cases as these were common in the past, and they are responsible for the very grave prognosis of the disease which the sixteenth and seventeenth century doctors gave, and the lay opinion of its incurability today. We rarely see such cases now, and have come to regard lues as a fairly mild and tractable disease. But occasionally it flares up with its old-time ferocity and we understand how it has been the scourge of nations.

The case that I have recorded is remarkable in the following respects: 1, in that there were no traces in the patient of past syphilis, I lay no stress on the history, knowing that willful and unwitting errors render it worse than useless; 2, in the number and size of the gummata, the case takes its place with those of Cazenave, Kaposi and Fournier as the half dozen most extensive cases of subcutaneous gummata on record; 3, in that death occurred from the gummata alone, from exhaustion and septic infection, without any complicating disease of the internal organs.

37 West 50th Street, New York City.

SYPHILIS AND MARRIAGE.

Read in the Section on Dermatology and Syphilography, at the Forty-seventh Annual Meeting of the American Medical Association, at Atlanta, Ga., May 5-8, 1896.

BY W. F. BREAKEY, M.D.

ANN ARBOR, MICH.

As a brief contribution to the assigned topic, "Syphilis and Marriage," I offer the following summarized history of a case with accompanying photograph, which, as the attorneys say, is put in evidence. The hard facts do not seem to need comment and are sufficiently "practical" to meet the request of the Chairman of the Section.

Mr. ——, age 63, married at 30, father of thirteen children, seven of whom are living, aged respectively 27, 23, 20, 18, 15, 12 and 10. All of these are afflicted with what the mother calls "catarrh." Of the six dead, the first died in a few hours, the next "had trouble with the spine" and died at 17; the next "had water on the brain" and died at 1 year and 9 months. The two others, I think, were stillborn or died in infancy.

The wife also speaks of her husband's disease as "catarrh." She states that "he had headache and some small painful lumps on his head when married, thirty-three years ago, but that the lumps did not become large till about twelve years ago. He fell out of bed in a fit about fifteen years ago and hurt his head. The lumps were cut open by a doctor about seven years ago at which time they were solid." The large depressions, shown in the photograph, are ulcers in the seat of the former "lumps" that were cut open, with abundant purulent discharge and dreadfully offensive odor; the outer plate of the skull is completely denuded of soft tissue, roughened on surface, in two or three large pieces, loose and movable, with ragged edges. In addition to ulcers and necrosis shown, there is ulceration of nasal fossæ with necrosis of vomer and nasal bones; and he is also so nearly blind with syphilitic iritis that he has to be guided about.

He suffers with severe pain in the head and some mental depression. The patient gave in substance the following history: That over forty years ago, about eight or ten years before he was married, a single youthful indiscretion, and the only chance for infection that he knew of, was followed some weeks after by a single small sore on his genitals, which a doctor in New York cauterized with "nitre of silver." The sore soon healed. He never had a rash that he knew of and had no internal or other treatment.

Beside the bearing of this case upon the questions pertaining to syphilis and marriage—which are so obvious, particularly in the history of the offspring, as not to need elaboration—are some points germain to this question and relevant to the pathology and

Ulcerative syphilis contracted 40 years before; primary lesion cauterized; no immediate constitutional symptoms observed; no constitutional treatment; gummata on scalp incised when solid; ulcers in seat of gummata on the plates of skull; necrosed, rough, ragged edges of loose bone; very offensive odor; necroses and ulceration in nasal fossæ; nearly blind with iritis.

treatment of syphilis, that seem important to mention here: 1. The wife, and mother of the thirteen children, appeared to be in good health and gave no history of syphilis or treatment for that or other illness. Did she have syphilis by conception and become immune? 2. What would now be thought of the error of cauterizing the primary lesion and the neglect of systemic treatment, and the assumption that after healing the patient was free from constitutional disease? 3. The cutting of the gumma. It is impossible in the light of modern experience to resist the belief that had this patient been sufficiently intelligent or properly advised and treated from the first he might have been cured or saved the commission of the great moral error in marrying under such conditions.

The history of the case may serve as text or sermon.

The consideration of "Syphilis and Marriage" in their relations to one another is one of greatest importance to the welfare of the human race, and none are so well qualified to discuss it as physicians. None know its prevalence so well as they, nor the delicacy or difficulty of arousing public attention. Professional obligations prevent the use of a "modern instance."

We have legislative enactments enforced by public opinion to protect against smallpox and scarlet fever, and many other less actively contagious diseases; and sanitarians seek to have included in the class of "diseases dangerous to public health" such moderately communicable diseases as typhoid fever and consumption. The state also enforces enactments to prevent or restrict infectious diseases even among brute animals. These diseases, however, usually occur in epidemic waves or in periodic seasons, but syphilis, which outnumbers most if not all of them, like death, "has all seasons for its own."

Yet there is neither enlightened public sentiment nor legislation of any kind to protect against its ravages. There is no sanitary placard nor even a general knowledge that discriminates.

The tendency in the popular mind to classify all unsightly diseases of the skin as communicable, subjects to moral suspicion the innocent victims of acne, eczema or psoriasis, while less conspicuous but genuine case of syphilis go unrecognized and unchallenged. And this popular misconception of the laity is too often strengthened, if not founded on thoughtless or erroneous professional opinion. Prudish notions or false modesty forbid inquiry. Breeders of domestic animals intended for food or beasts of burden are careful to select the best progenitors. But men who could not pass the physical examination for entrance to the army or navy, or even a good life insurance company, are accepted or engaged to marry, and enter without question into the most solemn obligations a human being can take upon himself; perhaps infecting an innocent healthy wife, and procreating children fore-doomed to feeble, wretched existence, if not to premature death. A further medico-legal question might be raised: "Is syphilis a valid cause for divorce?" And the answer must be determined largely on medical evidence as to the conditions in a given case. It is easy to conceive a case where such cause would be sufficient.

The long list of transmitted and inherited diseases is a frightful comment on our civilization. The halt, the lame and the blind, the feeble, the hydrocephalic, the paralytic, the imbecile and the idiotic go far to fill our almshouses and asylums. In this list syphilis is a frequent factor.

Whatever has been done to mitigate the evil or lighten the shades of this not overdrawn picture has been done chiefly by medical science, and evidently further progress in solving the problems must be made largely by physicians, and from a strictly medical point of view, without bias or other considerations than those of individual and public health. Though here is a case in which the political economist, the philanthropist and the missionary might find ample material for the study of disease, of poverty, vice and crime, and opportunity to coöperate with medical science in the endeavor to remove a prolific cause.

If the question be, "ought syphilitics to marry while uncured?" every consideration, medical, moral, social and sanitary, oppose by an emphatic no.

If the question be, "is syphilis an insuperable obstacle to marriage?" the answer involves the larger question of the curability of syphilis. If we believe syphilis curable—as I think the most of us do under favorable conditions, and when the physician can control the treatment from the first and continue it long enough—then we should have the courage of our opinions and act and advise accordingly, and we should urge the compliance with necessary requirements. If the question be as to the proper course to be advised to those who acquire syphilis, or in whom it develops after marriage, particularly the mother, or if syphilitic children are born, well established principles of treatment determine methods of procedure.

It may be a practical view—for the race it is a fortunate view to take—that from illicit intercourse of syphilitics few children are born, and very few of them are born alive. Even of syphilitic children born in wedlock, few, as we know of the small proportion alive at birth, survive the fifth year.

Yet the popular conception of the doctrine of Malthus is abhorrent to the finer sensibilities of humanity. Nature is lavish in all her procreative material and facilities for reproduction of species. One plant contains germs enough to seed an acre. Thousands of spermatozoa are secreted for one that fertilizes. It would be fortunate if we could be sure that only "the fittest survive." Weeds grow without cultivation where the choicest flowers with tenderest care wither and die. It seems often true that in selected and over-cultivated species the quality deteriorates, and we go down to the lower strata for hardier stock with roots deep in the mother earth, with which to cross or graft more vigorous, even though more vulgar life. The popular conception in the minds of the laity of the malignancy and incurability of syphilis, a misconception exaggerated by quacks and their advertisements, and too much supported by medical opinion, and too much taken for granted in the average prognosis and inefficient treatment, tends to a condition of doubt and discouragement, the practical effect of which is to leave many unfortunates to hopeless misery and despair.

It must become the province of medicine as it is the aim, to cure, not only simple and self-limiting disease, but all the ills the human body is subject to. One of the theories of the Christian religion rests on the possibility of recovery, under essential conditions, from moral disease. The Divine Healer and his disciples were of lowly origin. "The stone which the builders rejected became the head of the corner."

Time is a great corrector of ills, acquired or hereditary. Many of the subjects of syphilis are literal victims and have been as much or more "sinned against than sinning," and are as truly desirous of cure, in the largest sense of the word, as are the most penitent sinners who plead for moral and spiritual aids to reform.

Who shall say that a victim of syphilis, promptly and properly and sufficiently treated, can not recover and shall not be permitted by medical sanction to marry? Is there more danger that he will infect a wife or beget unhealthy children than if he had gonorrhea or tuberculosis.

The scope of this contribution to the discussion of a designated topic is limited by the supposition that other phases of the subject will be covered by other contributors; and also by the impracticability of more than

touching upon a few salient points that seem prominent in so vast a field, a field viewed from so many and varied standpoints by different observers and through different media. I have not considered the relative dangers to either parents or child, or the degrees of heredity, paternal, maternal or mixed; or the treatment appropriate to these varying conditions. It seems to me, then, if asked by a syphilitic man or woman, "can I safely marry without endangering my wife or husband or expected children?" we should be prepared to summarize the conditions under which marrige might be tolerated, if not justified, and the conditions under which it ought to be allowed.

In deciding these conditions we should remember, as Fournier says, that while syphilis is ordinarily contracted in youth and single life, its most grave and disastrous complications occur usually in mature life; in the late secondary or tertiary stage, a period almost indefinite in duration. For which reason the period of treatment, of observation and probation should be amply long; in general terms we may say from two to four years.

The period since infection, the character and extent of lesions, the involvement of particular organs, the occurrence of ulceration, gummata or nervous lesions, length of time, thoroughness and persistence of treatment, the absence or disappearance of adenopathy, may materially influence the time through which treatment should be continued in a given case. Further, to make whatever course may be accepted as the concensus of medical opinion of value to the human race in social, moral and sanitary life, it should be brought within the reach of those who do not consult physicians and therefore will not be benefited by it except it be carried to them. Can not public sanitation be enlisted to aid in spreading a more correct information on this subject. This seems important not only in the interest of the vast number of cases of venereal syphilis, but also in the interest of the very considerable number of cases of syphilis of the innocent.

The average popular professional skepticism as to the incurrence of syphilis only through venereal infection, is inconsistent with the extreme care taught and practiced in modern antiseptic medicine and surgery, to avoid chances of infection less probable and less dangerous. It is very probable that in the near future the syphilitic bacillus will be demonstrated beyond a doubt.

In the light of modern prophylactic science it does not require much of a stretch of prophecy to expect that we shall soon have some enthusiast offer a method of immunity against syphilis by artificial diluted inoculation or vaccination. Meanwhile, no doubt, conservative physicians will still rely on methods of cure.

THE MEDICO-LEGAL ASPECT OF EYE AND EAR CASES.

Read before the State Medical Society of Pennsylvania, May 24, 1896.

BY J. WALTER PARK, M.D.

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HARRISBURG, PA.

The subject chosen for my paper is one of special interest to me, and I feel assured it will be to the general practitioner, if I succeed in impressing upon your minds the necessity of a certain professional relationship which should exist between the general practicing physician and the specialist, in the examining and treatment of accidental eye and ear injuries, preparatory to what may become medico-legal cases. My subject is such an extensive one, that I will confine my remarks more particularly to accidental injuries. I wish to call your attention to the following points of interest: 1, the kind of an examination, and record of the case, that should be made by the physician in attendance at the time of the injury; 2, the kind of cases which should be examined by a specialist, or one skilled in the treatment of diseases and injuries of the eye and ear; 3, some of the requirements that are a necessity to the general physician and specialist in medico-legal cases, and their advantages to the plaintiff and defendant in suits for damages.

1. To illustrate the first division of my subject, I will cite a case which answers most every point I wish to impress upon you as regards the kind of an examination, record, etc., that should be made in such cases. In October 1892, I was sent by a railroad company to examine the eyes of Mrs. S., who one year and three months previously had been in a wreck on their road, and claimed that her present defective vision was due to injuries received at that time, and as a result brought suit against the company for damages. A careful examination of the fundus of each eye revealed dense opacities in the vitreous humors of both, and on account of their density no good view of either fundus could be obtained; yet to me it evidently was a case of disseminated choroiditis, which is generally the cause of these opacities and diminution of vision. Hemorrhages into the vitreous may also cause similar results; this the defense claimed was the cause, and was due to the blow she received as the car turned over. The attending physician had not made an ophthalmoscopic examination of either eye at the time of the accident, hence could not say what the interior of the eye looked like, whether any hemorrhages were present or not, but the patient claimed that from that time on her vision was impaired, and the jury awarded her damages accordingly. Had a careful ophthalmoscopic examination been made at the time of the accident, and a full record of the case been kept, either by the physician in attendance, or by a specialist, the opacities in the vitreous, I think, would have no doubt been discovered at that time already, and the verdict would have been the reverse. This case shows conclusively that in all accidental cases involving the eye or its appendanges, a careful history of the patient should be taken, a minute examination of all the injured parts should be made; notes of a careful ophthalmoscopic examination should be kept, and if the attending physician is not competent to do this, the patient should be sent to one who is competent, or a skilled man sent for to see the patient at his own home, and it should be done immediately.

2. I think that all accidents involving the eyeball, cornea, lens, iris, fractures of the orbit, or where the vision of your patient may be impaired in any manner whatsoever, from intra as well as extra ocular injuries or diseases, and in all cases where there are hemorrhages from the ears, signs of fracture of the skull involving the ear, where a careful examination for any previous existing deafness should be made, and a minute record kept, in all these cases the physician in charge should have in consultation a specialist,

unless he is capable of doing it himself in a skillful manner. As previously mentioned, the consultant should be called in immediately after the occurrence of the accident; this would be for the benefit of the patient, as well as for any future legal complication that might arise. Take nothing for granted, be sure you are doing all you can for your patient's welfare, as well as all parties concerned. A large sum of money may be due your patient for injuries sustained in an accident, or a like amount may be unjustly demanded of a corporation, especially when the cause of the alleged injuries existed prior to the accident. This can only be determined intelligently by a careful examination at the time of the occurrence of the alleged injuries. I was also asked to examine the hearing of a patient who had been in a railroad wreck, and had entered suit for damages against the company in which I am confident her deafness was due to a chronic catarrhal otitis media which has existed for years previously, yet this patient received several thousand dollars to settle the case without ever going into court. Was this justice to all parties concerned? Had this case been examined carefully at the time of the accident, and an accurate record kept of the case, it no doubt would have been tried by a jury, and the verdict would have been in favor of the defendant. At least both plaintiff and defendant would feel as though justice had been done, if a skillful examination of the patient had been made, regardless of what the verdict of a jury might have been. A third case of a severe neuralgia of the superior maxillary nerve, which at times involved the ophthalmic branch distributed to the eye, was sent to me by a prominent attorney, who claimed damages against a borough for alleged negligence on their part in not keeping the street crossings clear of snow.

His client had slipped and fallen, crushing in the malar bone, and thus injuring the nerve and causing a chronic neuritis of the superior maxillary nerve, with some pain in the ophthalmic branch, which occasionally caused him some pain in his eye, but had not in the least affected his vision. This accident occurred over a year previous to the plaintiff bringing suit for damages, and at the time the case was sent to me, almost two years after the accident, the claimant had perfect vision with his error of refraction corrected with lenses, very seldom any pain in his eye, and I could not discover any trace of impairment of vision in any manner whatsoever. This man wanted me if possible, to discover something wrong with his eye, so he could demand a larger sum of money when he instituted his suit for damages. No careful examination was made at the time of the accident, no records kept and as a result no definite testimony could be procured either for the plaintiff or defendant. Cases are rare indeed, where accurate and full records are kept, and yet we are constantly seeing them. Let us try at least to show professional skill in these cases, that we may appear as experts and not mere figureheads when summoned before a court of justice.

3. The requirements of the physician and specialist in a court of law in eye and ear cases, from a medical standpoint, are so numerous and complicated that I can but refer to a few of the more important ones. First of all, you should thoroughly understand the anatomy and physiology of the eye and ear, so that you can intelligently answer all questions relative to injuries of these parts. You should be familiar with the use of the ophthalmoscope, be able to use it, and differentiate a diseased eye ground from a normal one. It is well to know the general appearance of interstitial keratitis and that it is only syphilis, be it hereditary or acquired, that will produce that characteristic condition of the cornea, which when once seen is never forgotten. You should know how to treat them properly, and perhaps save your patient from becoming blind, and yourself from being sued for malpractice.

Gentlemen, it is necessary you should know something about such cases, or else send them to some one who does, and then you assume no responsibility. Be careful to always state the probable results be they good or bad. Make no promises of good recoveries, or as to length of time of treatment required, for if you do and your promises are not realized, but on the contrary your patient gets blind or deaf, and if you are unfortunately worth considerable money, you may soon lose it by paying damages and attorney's fees. In ear cases you should be able to detect a simulating case of deafness from a genuine one, the appearance of a recent ruptured tympanic membrane from a perforation produced by a suppurating ear. Suppose a pupil comes from school complaining of pain in one of his ears, and tells his parents his teacher hit him on his ear with the flat of his hand, the parent takes him to his family physician to have his ear examined. He finds a ruptured drum membrane, the case is taken into court, and under cross examination, you as the attending physician are asked: "Doctor, how do you know that the rupture of the drum membrane of this child's ear, is not an old perforation produced by a suppurating ear?" If you have ever seen cases of that kind, and remember their appearances, you will know how to answer intelligently. Traumatic perforations have traces of blood, fresh or dried, around the edges of the wound, and in using Valsalva's method of inflating the ear, the air passes out easily into the auditory canal, while in pathologic perforations it makes its exit only under greater pressure, and produces a whistling sound; also, that in rupture of the drum membrane from compressed air in the auditory canal, the rupture usually occurs at the periphery of the membrane, while in rupture from fractures of the bony parts, produced by kicks, blows, etc. upon the ear, it occurs in any part of the drum membrane. This is accounted for as follows, and is important in a medico-legal point of view. The drum membrane is generally somewhat contracted toward its center by the oto-muscular apparatus, and often favored by chronic hyperplastic forms of catarrh, atrophy and cicatrices near the periphery of the drum head, making this its weakest point where the rupture most always occurs. The examination of the ear should be very thorough following recent accidental injuries. You should always use reflected light and an ear speculum in examining it, so that when asked upon the witness stand as to what kind of an examination you made, you can at least give an intelligent reply. An employe may claim damages for loss of hearing, claiming it to be from a blow on the ear, when upon examination it is found to be due to impacted cerumen. I was asked to examine a case in which a large amount of money was demanded for loss of hearing, but after I removed a lot of impacted cerumen and two dead bedbugs from his ear, his hearing distance was normal and he never said a word about damages after that. The same precautionary measures, qualifications, exami-

nations, records of cases, etc. apply equally as well to diseases of the eye and ear, as they do to accidental injuries, which may come under our care in general practice or as specialists, and we should never undertake a case without consultation, unless we fully understand the nature of the disease we are about to treat, or having previously seen similar cases treated or operated upon by someone skilled in his profession, for by so doing we avoid suits for malpractice and share the responsibility. This duty we owe to ourselves as well as to our patients. An intelligent community demands this of us, and if we heed not the warning we must suffer the consequences. When on the witness stand, answer only such questions as you are obliged to answer, and do it in plain language and in as few words as possible. If you can better illustrate what you mean by models, etc., to a jury, do so. A juryman once said to me: "In medical cases we want the witness to use plain language and well illustrated if possible." In conclusion, allow me to summarize the following points of interest from the foregoing remarks.

1. In all accidental injuries, operative cases as well as in general diseases of the eye and ear, make a thorough examination of the parts involved. Keep a record describing in detail all the parts injured and your opinion as to any previous pathologic conditions that are present now and may have existed prior to the present injuries sustained, and the relation they bear to each other as regards the impairment of vision or hearing for the present or future.

2. If you are not capable of using skillfully the ophthalmoscope or the ear speculum with reflected light, have a consultation with someone who is expert in their use; and do it immediately after you are first called to see the case.

3. It is necessary to be well versed in the anatomy and physiology of the eye and ear. Study it in health and disease, so you are able to distinguish between normal and pathologic conditions, and especially try to have plenty of experience with cases, for if you lack in this particular you had better not approach a witness stand.

4. Consider well the interests of the plaintiff as well as the defendant. State nothing but facts, and in as few words as possible.

5. Always get the consent of the proper authorities before performing any operations, and never promise your patient any definite results, or how soon they will or will not recover from any injury or operation. I am speaking from experience, which after all is the best teacher.

EXPERIENCE OF AN AMERICAN PHYSICIAN IN MEXICO.

OPERATING FOR SUPPURATIVE LYMPHANGITIS UNDER DIFFICULTY.—TAKING HIS OWN MEDICINE.—STRYCHNIA POISONING.

BY D. H. GALLOWAY, M.D.
CHICAGO, ILL.

A peon came into my office and said that a man was "very sick in his leg." He also said that the man "belonged" to the railroad, so I sent him for a hospital permit while I went to the house. I found a man, 23 years old, lying on the floor in the front part of a little store. There was a space of three or four feet between the front wall and the little counter, and in this space the man lay upon a piece of straw matting, spread on the earth floor. The sick leg was uncovered and I proceeded to examine it. This was no easy task, as it was so dirty I could see nothing and so tender that he would not let me touch it with my fingers. On comparison I could not see any difference between the two legs, so I gave him a placebo and ordered a bath. In the evening they brought the message that he was very sick and was keeping the whole neighborhood awake with his cries. I went with the messenger and found things no better than reported. The bath they had not given him; because no Mexican is willing to take a bath when he is sick; and also because the poor fellow's leg was too painful to admit of such rough handling as would be necessary to get it clean. This time I found a small abscess over the edge of the tibia and concluded that there were more of them farther up the leg. I told the family that I would come back in the morning, put the patient to sleep with chloroform and operate on his leg. They seemed satisfied with this. I gave the patient a dose of morphin to ease the pain and allow him to sleep and then went home. Before leaving I told them to have ready for use five gallons of boiling water.

In the morning I got instruments and dressings ready before leaving home. Dr. Doty, a dentist, accompanied me to give the anesthetic, and a boy 14 years old, to assist me.

A description of the room in which we were to operate will be necessary to an understanding of what followed. This room was about eight feet wide, eleven or twelve long and ten feet high. There was a door in the middle of the front wall opening directly on to the street. This door was two or two and one-half feet wide, and so low that I had to stoop in entering to prevent my hat striking the top, and I am considerably less than six feet tall. At the back of the room there was a similar door opening into the other part of the house. No light came into the room except by the front door. At the back of the room there were some shelves against the wall, then a space of about two feet, then a counter, eighteen inches wide and extending from the wall at one end to within eighteen inches or two feet of the wall at the other end. This left a space of about four feet between the counter and the front door.

We put the patient on the counter and Dr. Doty, standing in the space between the end of the counter and the wall, anesthetized him. I took my stand behind the counter, facing the light, and the boy in front of it. They had prepared an abundance of hot water, in two earthenware vessels. One of these was kept boiling over a charcoal fire and the other on the counter at the patient's feet, for my convenience. A girl attended to keeping the fire going and changing the vessels as one became cold or empty. I filled a fountain syringe with hot water and suspended it from a rafter in the ceiling. As soon as the patient was asleep, I took a stiff brush in one hand, a cake of laundry soap in the other, let the water run from the irrigator and began to vigorously scrub the leg. I had hardly begun when the mother behind me set up a cry and shouted that we were killing her boy. In a moment the half dozen spectators increased to half a hundred. They crowded into the room and filled up the door, but could not get behind the counter. This shut off the light so completely as to stop all work. I requested them to go out, but they did not move. I had a stout cane with me, and with that I

reached over the counter and drove most of them out of the shop. They still filled up the door so that I could not see to work. I filled a cup with hot water and made a pretense of throwing it on the feet of those standing in the door, but they only looked stolidly at me. This was too much for my temper, and filling the cup again with hot water I threw the contents at the door, striking those who were blocking up the opening on the arms and chest. The water was nearly boiling and was effectual in opening a passage for the light. I threw more water as far as I could through the door, and the crowd fell back until it left a vacant space where the water showed on the dry ground. This space I kept clear during the entire operation by the same means. Every now and then a new-comer would elbow his way through, cross the open space and appear in the door, but before his eyes could become accustomed to the dim light within, about half a pint of hot water would strike him amidship and he would disappear with much more celerity than he had appeared. Every few minutes this would be repeated, no one outside seeming to think it his business to warn the unsuspecting victim, though there was no mirth; not so much as a smile did I see on the face of any one. Even we three reserved our smiles for a later time.

As soon as we had succeeded in clearing a way for the light, the scrubbing was resumed, and when that was finished we found a row of bright-red spots extending from just above the ankle, up along the tibia. Passing the knee, it crossed more to the inside of the thigh and stopped below Poupart's ligament. The largest of these spots was three inches or more in diameter, and they nearly coalesced into a broad red band. There was little or no swelling. With a scalpel I made a small opening in the one highest up the leg. Pus gushed out; I put my knife in again and enlarged the opening to two inches. Instantly there was another cry and a fellow, whom I had not seen before, "lit" on my back from behind. I struck at him with my scalpel and, in his haste to get out of the way, he tripped and fell to the ground on his back. I stood over him and, in the most forcible Spanish at my command, threatened to cut out his heart, liver, and various other thoracic and abdominal organs, if he so much as raised a finger at me again. After this interruption, I resumed the operation, only stopping occasionally to douse some fresh victim with hot water. The abscesses all seemed to communicate, so I made an incision two or three inches long, broke up all the little pockets with my fingers, then left about an inch and made another incision, and so on the whole length of the leg.

During all this time the crowd outside was making remarks, none of them complimentary and some of them threats. "He is dead! he is dead! the English butchers have killed him!" "Kill the butchers!" and many other remarks not conducive to our ease or comfort. When the man attacked me, Dr. Doty advised that we abandon the operation until we could come with a guard of soldiers. But I did not see exactly how we were to get away. The people already thought the man was dead, and would be sure of it if we by any means tried to leave while he was in that condition.

Several times as we neared the completion of the operation an old man came in, felt of the patient's pulse, looked at his eyes, then went out again and announced to the crowd that the man was not yet dead, but he soon would be. The investigator was a different man each time and always an old one, seeming to think he was less likely to get scalded. By the time I was done operating, the street was full of people, probably two or three hundred of them; they were noisy and restless, and we were pretty well alarmed for our own safety. We discussed the situation and decided that we could not leave until the patient had entirely recovered from the anesthetic. Not wanting them to think that we were afraid to go, I proposed to occupy the entire time necessary for his recovery in putting on the dressings. The Doctor stopped the chloroform as soon as I was done cleaning out the abscess cavities, I packed them all with iodoform gauze, wrapped the leg in sterilized gauze, put on absorbent cotton and then, beginning at the toes, covered the whole leg with a broad bandage. This I wound on with more care than is taken in doing a laparotomy, winding a few turns at a time, unwinding and rewinding, until the patient had recovered sufficiently to talk. Then we laid him down in his place on the floor and allowed his friends to come in one or two at a time and talk to him. When they found that he was alive and his pain all gone, a reaction set in, the crowd became quiet and we prepared to go. First I called in his mother and gave directions for his care, and asked that some one be sent to my office in the evening to inform me of the patient's condition. Then we gathered up our things and walked through the crowd as unconcernedly as possible. They separated without a word and allowed us to go through. That evening a messenger came to say that the patient was doing finely and wanted his supper, which was proof to them that he would get well. I directed the messenger to come again in the morning, and when he brought the same message, I ventured to go. I called every day, and each day for a week had difficulty in entering the house, so many stopped me to apologize for their rudeness on the day of the operation. I took out the packing and thereafter irrigated and repacked every day until it was healed. At the end of a week the wounds were rapidly closing up. About this time the man who jumped on my back the day of the operation, watched the dressing and then told me that he once had one small abscess on his leg, that the doctor made a very small opening in it and it required six weeks to heal; in this case the openings had been made very large, but were nearly healed in six days. He said he was a brother of the patient and thought I was cutting more than necessary and that was why he attacked me, but he was sorry for it now.

The point where the infection gained entrance, I failed to find, but as they seldom bathe their feet they often have abscesses under or about the nails and very frequently the heels are fissured. In this case the infection probably entered some small injury to the toe, the original wound healing before any trouble was experienced. The greatest unkindness you can do a Peon is to give him a pair of American shoes. The probabilities are that he will put them on and wear them day and night, without removal, till they are worn out. They are in the habit of wearing only sandals, but I have had men come to me wearing American shoes and complaining of sore feet. On removing a shoe, I have found the entire foot macerated like a wash woman's fingers and an odor that is best left unimagined. In such cases I would direct soaking in hot soap and water for half an hour at a time

three times a day. This treatment and a return to sandals was effective.

It will hardly do to call a country uncivilized because a surgeon is molested in the discharge of his duties. The same things, or worse have happened here in Chicago and less than a quarter of a century ago. One of Chicago's old surgeons has told me of a time when a doctor was accompanied by a squad of police when he went to a factory or tenement to do vaccinations. This same surgeon was once called into a house, from the street, to see a man who was "dying." The doctor wore a high hat and carried a large operating case and was thus recognized as a physician by some one who ran out of the house looking for one of that profession. It was a thickly populated tenement house and neighborhood. He found an invalid on a bed and apparently dying of asphyxia. The man's dinner stood on a table by the bed and this led the doctor to think he was choking from a morsel of food. A hasty examination proved this to be the case bnt as he was unable to remove the food quickly, he took a scalpel out of his case and did a tracheotomy. The patient began to breathe and in a short time was out of immediate danger. Meantime the friends and neighbors, who had crowded into the room, saw with horror the stranger plunge his knife into the patient's throat. They instantly scattered leaving their friend in the hands of the doctor, and spread the report that a doctor had cut the sick man's throat and killed him. A cry for vengeance went up and by the time the doctor had removed the obstruction from the throat of he patient he found himself beset by an angry crowd bent on his destruction. He threw off his coat and taking a large amputating knife in each hand he offered with much energy and some profanity to disembowel all comers. The more aggressive who had gotten into the room were now only too eager to get out and a scramble through the door resulted, again leaving doctor and patient sole occupants of the room. The former kicked out a window and shouted lustily for the police. Fortunately an officer heard his shouts and hurried to his relief, but could not make his way into the house. While he went for help the doctor kept the mob at bay with his knives and a judicious use of his extensive vocabulary of profanity. It required the combined efforts of a dozen policemen to raise the seige and rescue him from his perilous position. But for the fortunate circumstance of his having his operating case with him, he would probably have been killed.

There are now districts in every large city in this country where a man would not be safe under similar circumstances. It has been but a short time since a man was shot and killed in Kentucky because it was thought that he might carry smallpox through a "shotgun" quarantine. I will guarantee that before twenty-three store "holdups" could be committed in the city of Mexico as has happened in Chicago the robbers would be shot and the epidemic stopped. Superstition and a fear of anything new or unusual or not understood is a thing of which no clime, country, or people can claim a monopoly. We can not afford to throw stones very vigorously yet awhile. . . . .

When the average man arrives in a foreign land with the intention of making it his home, he is very prone to find many things which need reforming and he may be sufficiently enthusiastic and guileless to embark in the undertaking.

Soon after my arrival in Mexico I noted one custom which needed reforming. As it related to the taking of medicine and as I was both a druggist and a doctor and dispensed my own medicine, I thought that no other could do it quite so well—indeed I, like the preacher, felt "called" to the work.

Medicines are prescribed and taken in doses ranging from a tablespoonful to half a cupful. Infusions and decoctions are much used and consequently popular. This was the custom which I set myself the task of reforming. In pursuance of this plan of reform I provided myself with a silver teaspoon which I purposed showing to my patients when giving directions so that there could be no mistake regarding the size of the spoonful directed.

The "reform" went along swimmingly till one day a man came in who was suffering from a distressing cough. I made up for him a two ounce mixture, each drachm of which contained—5 grains of muriate of ammonia; 1-16 of a grain of tartar emetic; 20 minims syrup of ipecac; 10 minims of tincture of squills and syrup sufficient to make up the teaspoonful. I directed him to take a teaspoonful every two or three hours till expectoration was free.

The next day I got on the train to go to a neighboring city. In the baggage and mail car there was a small room containing a desk and a cot for the use of the conductor. After the train started I went from the first class coach, through the second and third class coaches to the baggage car, into this room and lay down on the cot. I was just falling into a doze when the door opened and some one stepped in. I supposed it was the conductor and at first paid no attention to him. But as he stood still and did not speak, I presently looked up over my shoulder and there stood my patient of the previous evening. For a moment neither of us spoke, nor did he move, not so much as a cough escaped him. Then he shot out a hand toward me and in it was the bottle of medicine I had given him the night before, half an ounce, or less, of the medicine still remaining. Accompanying the gesture, he said, "see that?" I replied, "yes, that looks like the medicine I gave you last night." He said, "Yes, it is, I take one dose and now damn you, you take some," at the same time drawing from his clothes a "six shooter" and holding the muzzle two inches above my nose. I measured the "gun" carefully with my eye; it was about two or three feet long and had a bore about the size of my coat sleeve! I could look directly into the barrel and see that it was loaded to the muzzel with coupling pins and links and other railroad iron. Visions of coffins, graveyards and funeral processions passed dimly before my eyes, but whether the "gun" was loaded with them too, I did not know. Remembering that I belonged to an arbitration society, I was inclined to be conciliatory, so I said: "Certainly, I'll take all of it, if you like." Suiting the action to the word, I turned up the bottle, drank about a teaspoonful, smacked my lips and said: "That's all right; now if you take it according to directions it will cure you."

He took the bottle from my hand, put it in one pocket, the revolver in another and went out, Then I thought: He took one dose; in that he got at least $\frac{3}{4}$ of a grain of tartar emetic, 60 grains of muriate of ammonia, 4 teaspoonfuls of syrup of ipecac and 2 teaspoonsfuls of tincture of squills. That dose he took last evening at about 7 o'clock and then he was coughing very vigorously, this morning at 10 o'clock I did not notice him cough at all.

When a man puts his hand to the plow and the plow strikes a stump, sometimes it is better to turn back. From that time on I believed in large doses. Thereafter when a patient brought me a quart bottle for medicine and I wanted to give him eight doses, I put in the proper quantity of medicine, then filled the bottle with water and directed—eight tablespoonfuls every hour. . . . . .

One day I received a telegram asking me to meet a train and take off a sick passenger. I went to the depot and when the train arrived, the conductor stepped off and told me that one of the passengers had been taken with a fit and the train crew would like to be relieved of the responsibility of his care. I took the patient off the train and he was able to walk, with the assistance of two men, to the hotel which was a block away. They were obliged to stop frequently as his arms and legs would jerk in a way which was alarming to his conductors and to himself. After I got him in bed, I asked whether he had been taking any medicine. At first he said no, but afterward, recollected that he had taken a dose a short time before the "fit" came on. The doctor who had given it told him to take a teaspoonful. Having no teaspoon, he drank out of the bottle that amount, as he supposed. I looked at the bottle and estimated that he had taken about five drachms. He had taken but one dose and the bottle was full when given to him. The label informed me that each teaspoonful contained, among other things, 8 minims of Squibb's fluid extract of nux vomica. On the slightest movement his muscles would jerk and twitch in a most distressing manner. He said he had what seemed an uncontrollable desire to kick and strike and jump about in every direction and it was only by the exercise of all the power of his will that he was able to refrain from doing so.

I told him that his recovery depended on his ability to lie perfectly still. I gave him a sedative and he remained quiet but wide awake for six hours when he slept, and next morning was well.

REPORT OF A CASE OF COMPOSITE MONSTER—MONOMPHALIC ISCHIOPAGUS.

Read before the Chicago Pathological Society, June 8, 1896.

BY ELIZA H. ROOT, M.D.

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M. J., Swede, blonde, age 26; domestic; primipara; entered the Chicago Hospital for Women and Children, March 18, 1893. Last menstrual period July 7, 1892. Patient was delivered May 4, 1893, 301 days from the beginning of last menstruation.

On entering the clinic the patient was pale and passing albuminous urine with low specific gravity, in excess of the normal quantity in the twenty-four hours. Under treatment the albumin disappeared, to again return for two weeks preceding labor. The patient complained of the weight of the tumor and of pain along the line of Poupart's ligaments.

Examination.—Inspection found the abdominal tumor very large and prominent, abdominal muscles tense and the skin greatly stretched; size of pelvis normal.

Palpation discovered two heads in fundal zone of the uterus and to right of median line. The head of the posterior fetus lay deeply in relation to the anterior uterine wall. Back of anterior fetus easily followed to breech into the iliac fossa (left). Fetal heart sounds were heard above umbilicus, a little to left of median line. Second heart sounds not heard. Although polyhydramnios was present, the uterine contents were not freely movable, except the head of the anterior fetus and at no time could the extremities be determined. Internal examination found anterior vaginal fornix empty.

Diagnosis.—Twins; first, breech sacro-anterior; and second, breech sacro-posterior; both oblique (the vertical axis of the uterus in median line), with a provisional diagnosis of "something unusual, perhaps a double-headed baby." This last was made only half in earnest, for the idea of a composite monster had not taken serious hold upon my mind. On April 18, albumin reappeared in the urine; urine excessive in quantity, frequently amounting to 90 or more ounces in the twenty-four hours. The patient complained of feeling dull and weary. The tumor was very large and hanging well forward. The bowels were kept free with small daily doses of Epsom salts. Blaud's iron pill was given for the anemia. April 29, patient

FIG. 1.—Anterior view, with foot of posterior fetus in front.

restless and does not sleep well; excessive amounts of albuminous urine continues to pass. May 3, patient began to have slight uterine contraction-pains. During the night labor was established. As there was no progress made of the presenting parts, the pains being strong, the house physician called me to the hospital on the morning of May 4. I found the os well dilated, the membranes ruptured, and a presenting mass only partly engaged in the inlet. The examining finger found no feet, no namable part and slipped into a rather large orifice guarded by a border of loose folds. It was very evident my provisional diagnosis was more than true, and that I was confronted with a difficult and dangerous labor. Dr. John Bartlett kindly responded to my call for assistance. The patient was put to sleep with chloroform and the pelvis explored, which confirmed the diagnosis of double breech presenting. Pains continued strong and we proceeded to deliver. The obstetrics of the case is of considerable interest. Given a square mass present-

ing, the feet not being found, it was fair to assume that the legs were extended, giving in each a breech presentation of the incomplete variety. The application of forceps proved useless, and further examination found the right limb of the second sacro-posterior fetus resting transversely upon the anterior ramus of the pubis (see photo. Fig. 1), the hip caught above the brim and preventing descent. All efforts to push the limb out of the way were fruitless as it had become firmly impacted between the fetus and pelvic brim.

The posterior limb of the first sacro-anterior fetus was seized and brought down giving some increase of space and a handle for traction. Descent was still unsatisfactory, and another limb, the posterior limb of the second sacro-posterior fetus was with difficulty brought down, but securing more space, partially breaking the wedge and giving an added means for traction. To and fro movements with strong traction upon the disengaged limbs brought the double breech well into the pelvic cavity.

FIG. 2.—Left lateral posterior view, approximating true position in utero. 1, first sacro-anterior; 2, foot of posterior fetus; 3, second sacro-posterior.

Advancement was now progressive though slow and difficult. The finger could now be hooked into the groin of the transversely lying limb of the second sacro-posterior fetus. This limb was now gradually pushed upward by the descent of the mass and became extended parallel to the trunk of fetus, which with the remaining anterior limb of the opposite fetus acted as a splint, making the crossing of the pelvis and advancement into the axis of the outlet extremely difficult.

At the expiration of two hours our combined efforts brought the double breech, partially rotated into the vaginal opening. The two unborn limbs were disengaged and the true nature of the deformity became evident.

As advancement of the two trunks together would further complicate labor by bringing the two heads face to face into the inlet the two bodies were separated at the pelves. The now second sacro-anterior fetus was brought down and passed the now first sacro-posterior fetus until the nape of the neck could be reached for decapitation. Delivery was soon completed without hemorrhage. Traumatism of cervix and vaginal walls was considerable; the perineum was ruptured and repaired with sutures of silkworm gut. The placenta came without difficulty and weighed 3½ pounds. Aseptic occlusion pad was applied to vulva and the patient put to rest greatly exhausted; pulse 150; temperature 100.6 F.

Morning of May 5, temperature 98.6, pulse 126. Evening of same day, temperature 99.6, pulse 90. Patient could not move her lower extremities and the urine escaped without the patient's knowlege. Albumin in the urine abundant.

Recovery was uneventful though slow, the temperature rising on May 7 to 100.4 with slight headache, pulse 100. May 23, urine normal in amount for the twenty-four hours with only a trace of albumin, patient anemic. June 24, the patient left the hospital in fair health. Traumatisms healed by granulations. The fetus, female, combined weight 11¼ pounds, of nearly equal size and perfectly developed to the umbilicus. Celosomic; the liver of the second sacro-posterior fetus small and deformed, protruded into a sac formed of part of the transparent membrane enclosing and common to both abdomens.

Umbilical cord eighteen inches in length; "fat," was attached to the abdomen of the second sacro-posterior fetus at or near the outer angle of the abdominal junction, which formed a sharp groove similar to that formed in a dress shield, and on the margin of the incompleted abdominal wall. At the umbilical site of first sacro-anterior fetus was an anus-like opening guarded by a few scattering stiff and short hairs resembling the rictus bristles of a bird. This proved to be the opening of the urachus, developed and serving the purpose of a urethra, there being no urethral opening in the natural or normal situation, the bladder ending in a blind pouch, the bladder receiving two ureters in a normal manner, one from a kidney of each fetus. There was only a vaginal orifice unsphinctered and guarded by a loose fold of tissue bearing little or no resemblance to normal structures. Vaginal canal large and received the single cervix of a two-horned uterus; ovaries and tubes normal; kidneys two in number, right kidney normal in size and location, left lobulated and situated in the hollow of the sacrum; second sacro-posterior fetus possessed three kidneys, the left situated lower than normal, while a second rested upon the promontory of the sacrum to the right of its median line, its convex outer border looking to the left as if a left kidney had slipped down from its place. The third and right kidney was undeveloped, with a helix that received blood vessels but gave off no ureter. The bladder received two ureters, one from a kidney of each fetus as in the preceding case. The meatus urinarius opened normally into a fairly developed vestibule that is guarded by two folds. Nymphæ minoræ that hooded a well developed clitoris. The labia majora are loose rudimentary folds bearing some resemblance to the normal structures. The vaginal canal is large, and receives a double cervix of a two-horned uterus, but one cervical os. Ovaries and tubes are normal. In both cases the ovaries of each uterus rested, one in the pelvic cavity of one fetus; its fellow in pelvic cavity of the opposite fetus. Both uteri were two-horned. The bladders are located in front

of the uteri and the rectum descended between them in relation to the posterior surface of each.

Intestinal canal: Small intestines in two sets, one for each fetus. Until near the cecum they united forming a large intestine or colon; sigmoid flexure and rectum common to both.

The appearance of the external parts are peculiar. The coccyx of each protrudes, forming a process about the size of a filbert. In normal relation to each is an anal depression or pit, directly between which is located a perfect anus common to both children. To the right and left of the perfect anus are the rudimentary pudenda. The extremities, upper and lower, are well developed and the heads well shaped.

DISCUSSION.

Dr. JOSEPH B. DELEE—This is a very interesting and unusual monster, the termination being favorable to the patient. When we consider the immense amount of dystocia monsters like this can cause, and the difficulties attending diagnosis and treatment, we can not but congratulate the Doctor. It is a peculiar fact that double monsters are said to cause much less dystocia than single ones. Professor Hohl in 1850 collated the statistics on the subject and found that 55 per cent. of single monsters caused dystocia, while only 38 per cent. of double monsters caused it. One reason is that single monsters are so likely to have displacements, such as transverse and other positions, and a large number of this class of monsters is due to hydrocephalus and enlargement of the abdomen or other cavities. Whereas double monsters will abort frequently, single monsters go to term. I remember in Berlin to have seen an abortion of three months in which there was a perfect miniature representation of the Siamese twins. The two fetuses were united together at the xyphoid appendix. In regard to the diagnosis of the double monster, there is hardly a case in which a diagnosis of it is positively made before labor. The majority of cases have gone to labor, and only when there has been obstruction has a diagnosis been made. Even then, a number of cases are difficult to diagnose, particularly where there are twins, one across another, or the two heads entering the pelvis at once or two breeches. In a single monster the diagnosis is easier. I have seen a diagnosis made of anencephalus through the abdomen by determining the breech in the fundus and no head over the inlet.

The Doctor has dealt with the division of monsters largely from a pathologic aspect. What has interested me in studying double monsters is the clinic aspect, because it is more important to the practitioner. G. Veit has written a monograph on the subject. He divides monsters into three forms. First, those where fission begins on top. The top of the monster is divided into two parts, either two heads or two faces stuck together, or the division proceeding further down, so that there are two complete heads with either one or two arms on each side. The second division is monsters united by fusion: Craniopagus, either front or back, vertex or face, ischiopagus. I think the Doctor's case was an ischiopagus in which there was dystocia of a double monster. Being united end to end, the children should have been delivered one after the other but for some reason they became doubled up like an U and thus offered almost insuperable obstruction to labor. The third division comprises monsters with a point of union near the middle of the trunk. The fission is both from below upward and above downward. Example, the Siamese twins.

In the treatment of this form of dystocia the plan works nicely also. First group, fission at either end, for example, a diprosopus (two faces). Here you would do a version or craniotomy, it being simply the size of the part causing a mechanical disturbance. In general, breech presentation is more favorable in labor with monsters, because there is something to pull on. The second division of the first class, where the fission is from below, the dipygus, there being two to four legs. In general, traction on one or two legs will not bring the others down; you must get all there are and make traction on them.

The second class of monsters, where the bodies are joined end to end, seldom give trouble, as they slip through as a long cylindrical mass. This was the case of the ischiopagus monster exhibited in the museums here about six years ago.

The third division, the thoracopagi, the xiphopagi, give the most trouble. Since the band of union is often very movable it is possible to deliver one child by version and extraction and then the other likewise. Or in certain cases, bring down all four extremities, now deliver the rear child, then the other. Generally, it is a bad plan to amputate the parts which are born; true you get more room, but it disturbs the relations of the parts and you lose a good handle on which to make traction.

PRIMARY SARCOMA OF THE TAIL OF THE PANCREAS.

Read before the Chicago Pathological Society, June 8, 1896.

BY FRED. J. E. EHRMANN, M.D.

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Sarcoma has been found in almost all parts of the human body where mesoblastic tissue occurs. The frequency of its place of origin, however, varies greatly so that sarcomata in some locations are common, in others almost unknown. Thus primary sarcomata of the bones, eye, kidney, glands, brain, etc., occur with relative frequency, but primary sarcoma of the pancreas, for instance, is very rare. This statement is substantiated by our best known writers, some of whom emphasize their rarity; others make no reference to primary pancreatic sarcomata at all. Thus Ziegler[1] writes that such growths are extraordinarily rare and Orth[2] says that primary sarcoma of the pancreas is almost unheard of.

To show the relative frequency of tumors of different varieties occuring in the pancreas, I may refer to Segrè's[3] table of 11,492 autopsies with 132 pancreatic tumors, of which 127 were carcinomata, 2 were cysts, 2 were sarcomata, and 1 a syphilitic growth. Segrè fails to state, however, whether the sarcomata were primary or secondary.

Some of the reports leave doubt as to the real nature of the tumor. Thus E. H. Bartley[4] reported a case in 1880 of a patient who had vomited after meals, complained of pain in the epigastrium and emaciated rapidly. The tumor was "a spindle-celled growth, probably a carcinoma of slow growth, a scirrhus cancer, or possibly a spindle-celled sarcoma." Bruen[5] in 1883 and C. Workman[6] in 1892 described tumors of the pancreas, leaving doubt as to their real pathologic nature.

In 1883 Chiari[7] reported a fair-sized sarcoma of the pancreas, but considered it secondary. The patient was 43 years old, and the tumor is described as "a globular tumor in the head of the pancreas, soft, fragile, brownish-black, within a 2 mm. thick capsule through which the tumor-mass protruded here and there. There was also a brownish tumor in the omentum, in the fossa iliaca sinistra, and in the left eye, which probably was the primary tumor." Microscop-

1 Ziegler: Lehrb. d. sp. Path. Anat. 1892, 619.
2 Orth: Lehrb. d. sp. Path. Anat. 1887, i, 904.
3 Segrè: Schmitts Jahrb., Nov. 15, 1889.
4 Bartley: Annals Anat. and Surg. Soc. 1880, ii, 495.
5 Bos. Med. and Surg. J., 1883, cviii, 110.
6 Glasgow M. J., 1892, xxxvii, 385.
7 Virchow: Hirsch Archiv, 83, ii, 211.

ically the tumor consisted of spindle cells with brown pigment.

Litten[8], however, is the first one to report a primary sarcoma of the pancreas. This occurred in a boy 4 years of age, who complained of tenderness over the abdomen and occasional diarrhea. On examination a tumor, which filled the entire abdomen, was visible through the abdominal wall. Nothing is said of the exact location in the pancreas of this tumor. Microscopically he found a small, round-celled sarcoma.

In the following year Briggs[9] reported a case where bloody vomit, fatty stools, emaciation, ascites and a fixed epigastric tumor existed. The ascitic fluid was alkalin, turbid dark brown, of 1012 sp. gr. The pancreas, which was removed by operation, was examined with the following result: "A sarcoma, although there is evidence of a preëxisting hydatid shown by the hooklets of the affection, with the cells of a spindle-celled sarcoma." In 1892 Garda y Mansilla[10] also reported a sarcoma of the pancreas.

Of these seven cases the diagnosis is exceedingly doubtful in three; in the remaining four sarcomata existed and of these two were primary, one possibly primary and one secondary.

It will have been noticed that where the location of tumors has been specified the head of the pancreas was their seat. The case of which I make a report is a round-celled sarcoma of the tail of the pancreas. The history is as follows:

A. G., a German widow, 56 years of age, a washerwoman, resident of the United States for thirty-two years; had had a sense of weight in her epigastrium, frequent attacks of anorexia and occasional dyspnea for two years. Weakness gradually progressed so that she had been almost completely incapacitated for work some months before her admission to the hospital, on Sept. 15, 1895. Three weeks before admission a dull, continuous pain began in the epigastrium accompanied by a slight cough with frothy expectoration, a dull pain over the anterior surface of the chest, aggravated on deep inspiration, constipation, pollakiuria and dysuria.

The family history was negative. She had had typhoid fever twice. She had given birth to three healthy children; never had a miscarriage nor any puerperal fever.

The examination made the day following the day of admission, showed the following: Mind clear; skin dry and subicteric; nourishment fair; eyes sunken, pupils equal and reacting to light and accommodation; tongue heavily coated with somewhat dry margins.

Heart: Apex beat plainly visible in the fourth interspace, somewhat to the right of the left mammary line; the beat fairly strong on palpation. The right border of the heart was at the middle of the sternum, the upper border in the second interspace, the left border at the mammary line. The sounds were muffled, but no murmur could be heard.

Lungs were resonant and the breath sounds audible all over, except below the ninth rib posteriorly on the right side. There were few crepitant râles in the axillary region of the left lower lobe. The epigastrium was more prominent than normal and quite tender.

Liver extended from fifth rib to a point four finger breadths below the costal arch in the right mammary line, and reached beyond the left mammary line to the left. Palpation revealed a hard, nodular border near the right iliac crest, whence it could be followed to a point about an inch above the umbilicus, where a large notch was present. From this point the border descended to the left to a level with the umbilicus and continued on this level beyond the left mammary line. The entire margin moved with inspiration. Beneath this edge to the left of the umbilicus there was a distinct, firm, tender mass, about the size of a chicken's egg, which did not descend on inspiration and could not be displaced upward.

The bones of the body were negative. The glands of the lymphatic system were not enlarged and no edema existed.

On admission the temperature was 100.6 degrees F. and four hours later reached the highest point recorded, 102.8 degrees. The respirations varied from 30 to 36 and the pulse from 96 to 120. Preceding her death, which took place on Sept. 25, 1895, the temperature became subnormal. No sugar was found in the urine and the feces were never examined.

The postmortem examination was made sixteen hours after death. The body was fairly well nourished; skin subicteric; there was the usual posterior lividity in moderate degree.

The heart was larger than its owner's fist and flabby; subepicardial fat was abundant on the anterior surface and along the course of the vessels petechiæ were to be seen. The mitral orifice admitted three finger tips, the tricuspid four. Both semilunar valves were found competent to the water test. The free margins of the aortic valves were thickened. The left ventricle was 7 cm. deep and its wall measured 1.5 cm. in thickness on the average. The right ventricle was 8 cm. deep and its wall averaged a thickness of 3 mm. The myocardium was pale. The aorta was slightly dilated, the intima thickened in areas.

The pleural cavities were free from adhesions. The right contained about 6 ounces of clear, straw-colored fluid. On the visceral pleuræ of both lungs there were quite firm, whitish areas of about 2 mm. diameter. The lungs had pale, translucent margins and contained a quantity of frothy fluid. The right lung was adherent to the pericardium.

The peritoneal cavity contained a considerable quantity of straw-colored fluid. The peritoneum was smooth and shiny.

The liver reached almost to the right iliac crest and almost to the umbilicus in the midian line. It weighed 5590 gms. It measured 35 cm. from right to left; the right lobe measured 32 cm. from above downward, while the left measured 22 cm. The liver was 13½ cm. thick. A deep and wide furrow extending transversely over the anterior surface of the right lobe permitted of great mobility of the lower one-half on the upper. The surface of the liver was grayish and was studded with slightly raised, firm areas, varying from the size of a pea to that of a walnut. Similar areas were found throughout the parenchyma of the liver; some were pale and hard, others had a dark periphery and a softened, pale center and all could readily be peeled out.

The stomach was completely covered by the liver. At the cardiac end it was adherent to a tumor-mass behind and below it. Its wall was not infiltrated as far as could be seen with the naked eye, and its mucous membrane was normal. The intestines were normal.

The tail of the pancreas merged into a tumor-mass situated in the region of the left suprarenal capsule. After the organs of this region were taken out *en masse* it was found that the kidney, suprarenal and spleen could be readily and completely removed. The tumor was nodular, measured 7 x 7 cm. and was quite firm. The cut surface showed a pale lower half which was distinctly continuous with the pancreas; the upper one-half was of a pinkish color. The spleen was negative.

Both kidneys were of about normal size; the capsules were adherent; the cut surfaces were pale and the cortical markings were indistinct. The renal pelves, ureters, bladder and suprarenal capsules were normal.

The uterus had a pedunculated, pea-sized body protruding from the os, which was connected with the cervix. The ovaries were hard and almost cartilaginous. The nervous system was not examined. Enlarged glands were found at the celiac axis.

The anatomic diagnosis was: Pulmonary emphysema and edema; fatty heart; atheroma of the aorta; adhesive pleuritis; chronic nephritis; uterine polypus; atrophic ovaries; primary tumor of the tail of the pancreas; secondary tumors of the liver and pleuræ; secondarily enlarged celiac lymphatic glands.

The microscopic examination showed the tumor in the tail of the pancreas to consist of small round cells without any definite arrangement, imbedded in a stroma which in places was very finely fibrillated, in others more coarse and fibrous. There were large vascular channels and areas of hemorrhage throughout the tumor. The nodules in the liver and the pleuræ showed the same structure.

Conclusion: In the foregoing has been described a small round-celled sarcoma of the tail of the pancreas with secondary tumors in the liver. It is believed that the primary tumor originated in the substance of the pancreas, because of the intimate connection between the pancreatic tissue and the tumor, which appears to be continuous with and to replace the structure of the pancreas. The tumors in the liver and pleuræ were manifestly metastatic and

[8] Deutsche Medizin. Zeit. Oct. 22, 1889.
[9] St. Louis M. and S. J., 1890, lviii, 154.
[10] Garda y Mansilla: Progresso med. e farm., Madrid, 1892, i, 77.

the logical conclusion would be that in the absence of any other primary tumor-focus this case will have to be interpreted as one of primary sarcoma of the pancreas.

On account of this very unusual location of the sarcoma, it was concluded that the case merited the forgoing brief report.

LIPOMA DEVELOPED IN THE UPPER END OF THE SEMITENDINOSUS MUSCLE.

Read before the Chicago Pathological Society, June 8, 1896.

BY GEORGE H. WEAVER, M.D.

Professor of Pathology Northwestern University Woman's Medical School; Instructor in Bacteriology Rush Medical College, Chicago.

CHICAGO, ILL.

This specimen is presented, not because of its being a lipoma, but since it is interesting from its location and considerable size. There is no clinic history of the case and the tumor was discovered accidentally in a subject in the dissecting room of Rush Medical College during the winter of 1893. A student called my attention to a swelling in the upper and posterior part of the thigh of a male subject, which he had not noticed until after the removal of the integument. As it appeared with the covering of fasciæ an abscess was suspected. There was a sensation on palpation suggesting fluctuation, which was felt transversely through the tumor, but not in the vertical direction. On dissecting down to the tumor it was found to be located in the semitendinous muscle at its upper end, extending from the insertion of the tendon to the tuberosity of the ischium downward. The muscle separated easily and naturally from the surrounding structures. The tumor was oblong, five inches long and three inches in diameter transversely at the center. Its surface was smooth and even, and covered everywhere by the fibers of the tendon and muscle, which had been uniformly spread out over the surface. On section it was found to be a lobulated lipoma. A small calcareous nodule was located in the upper part at some distance from the bone. Ziegler (Lehrbuch der Speciellen Pathologischen Anatomie, Jena, 1890) places lipoma of muscles among the uncommon tumors. Sutton (Tumors, Innocent and Malignant, 1893, Philadelphia) says that many examples of fatty tumors occurring in the midst of muscles have been reported and are of interest from the trouble they cause in diagnosis. He says they have been found in the deltoid, biceps, humerus, complexus and rectus abdominalis, in the muscular tissue of the heart and in the middle of a submucous myoma of the uterus. Senn (The Pathology and Surgical Treatment of Tumors, 1895, Philadelphia) says that lipoma inside the tendon sheath springs from the adipose tissue of the mesotendon, and that it usually develops as a multiple tumor which presents an arborescent appearance and is easily mistaken for tuberculosis of the tendon sheath and for flexiform neuroma. The present instance does not correspond to the variety described by Senn, and does not differ in its appearance from a lobulated lipoma in the subcutaneous tissues. From its deep location and the sensation of fluctuation imparted to the fingers on palpation, it might readily have been mistaken during life for an abscess.

Chair of Massage.—The *Progrès Méd.* mentions as a fact unique in Europe that the University of Berlin has created a professorship of massage and orthopedia.

THE DEGENERATE JAWS AND TEETH.

Read in the Section on Neurology and Medical Jurisprudence, at the Forty-seventh Annual Meeting of American Medical Association, held at Atlanta, Ga., May 5-8, 1896.

BY EUGENE S. TALBOT, M.D., D.D.S.

FELLOW OF CHICAGO ACADEMY OF MEDICINE.

(*Concluded from page 1202.*)

Modification of the V-shaped arch results from modification of the above named conditions. A difference in the time of eruption of the cuspids, everything else being equal, effects a difference in the space left for their accommodation and thus partial V-shaped arches (Fig. 55) are found. The keystone, the cuspid, is not entirely outside or inside of the arch in the partial V-shaped form, but may appear partially crowded out of place. Hence, the arch is neither a normal curve nor wholly angular, but unites the characteristics of both. Its lateral diameter is less than that of the normal arch, giving a contracted

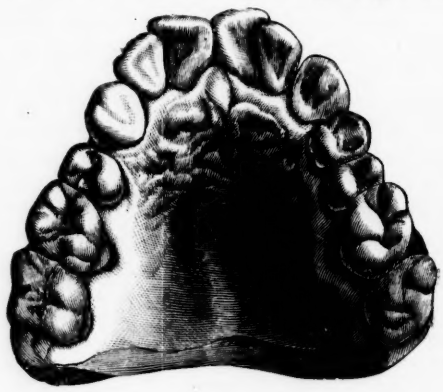


Figure 55.

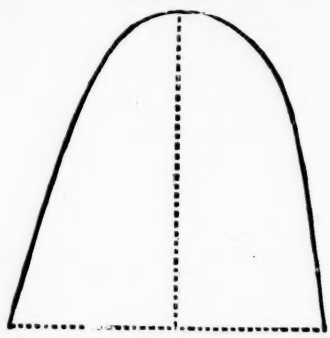


Figure 55.

appearance. Thus a number of varieties of the fundamental forms of the V-shaped arch are formed differing in degrees of anterior contraction. All of these result from the comparative thinness of the anterior portion of the process offering but little resistance, an abnormal pressure from behind, and the greater strength of the cuspids which cause them to seek room irrespective of the space left for them. When one side of the process near the symphysis is the stronger, thus affording greater resistance, or the pressure from the cuspid is less, that side may maintain its normal relations, while the other may give way to conditions resulting in a V-shaped contraction. The curve will then be broken not at the apex of the triangle, but near it, the incisors will overlap, and when pressure from the cuspid acts on the weaker column it must give way. This results in the semi-V-shaped form (Fig. 56). When the permanent bicuspids erupt under a favorable condition, so that their greatest diameter is in a line with the greatest

diameter of both cuspids and first molar they will be held firmly in place since the greatest pressure is on this very line. On the other hand, when the bicuspids are erupted after their proper time while the cuspids progress duly, the cuspids, meeting with no resistance, fall into their proper places, but the bicuspids adapt themselves as best they can to the space left for them, and if the arch of the maxilla does not coincide with that of the crowns they must fall within or without the arch. Now if the first molar has moved forward, diminishing the space, the bicuspids must erupt either within or without the arch.

To understand why they are generally found within the arch the shapes of the molar and cuspids must be kept in mind. A transverse section of their crowns shows their proximal walls not to be parallel but wedge-shaped, their diameter being greater on the buccal than on the palatal side. When the crowded bicuspid falls within the greatest diameter

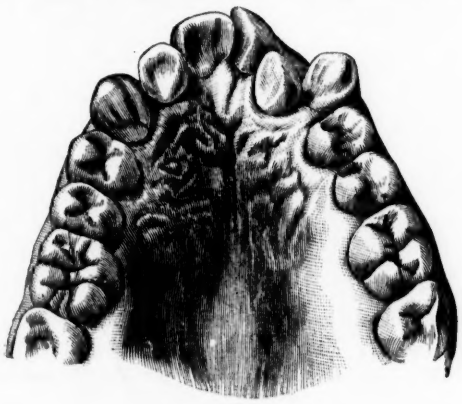


Figure 56.

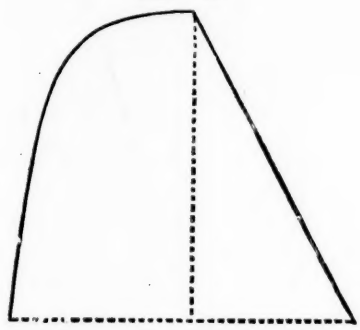


Figure 56.

of these teeth, finding more room within the arch, they naturally slip in the direction of least resistance, *i. e.*, toward the palate. A local cause for the same condition is found in the fact that the crowns of the bicuspids before their eruption are held between the roots of the temporary molars, and as these form an arch of a smaller circle than that of the permanent teeth, the bicuspids will be found generally inside the arch. From both causes we have an inward curvature which we term the saddle-shaped arch (Fig. 57). It should be noted here that while the V-shaped irregularity is found anterior to the cuspid, the upper incisors are always projecting beyond the lower, the saddle-shaped irregularity is invariably posterior to the cuspid and the bicuspid form an inward curve. The incisers never project. Both forms contract the arch, the V-shaped anteriorly, the saddle-shaped posteriorly. In both forms the forward movement of the first molar is the local cause. When the unfavorable conditions that result in the saddle-shaped arch are not so pronounced we have the partial saddle-shaped arch (Fig. 58). Thus because of the greater uniformity of the maxilla and of the arch of the crowns there may be more space and the bicuspids may be forced but little out of place, or the molar may move forward but slightly, interfering less with the bicuspids. Sometimes it happens that in trying to adjust themselves to the limited space one bicuspid may be crowded outward and another inward. Sometimes the first bicuspid is in, more frequently the second. As has been stated before, this ought not to take place if the greatest diameter of cuspids, bicuspids and molars were in the same line, but the diameter of one of the bicuspids may be in a line with that of the adjoining tooth while that of the other is not, and then one is pressed along the line of the least resistance. As in the case of the V-shaped arch one side of the mouth may be normal because of the absence of any local condition interfering with the space.

Figure 57.

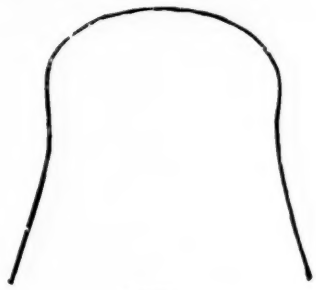


Figure 57.

One temporary molar may have been extracted, allowing the permanent one to move forward while the other remains in place. The result which follows is an asymmetry of lateral halves termed semi-saddle-shaped irregularity (Fig. 59). How the V-shaped and saddle-shaped arch on one side only may be produced has already been described. How they may be combined on one side remains to be explained. Given thinness of process in the interior part of the mouth, premature or tardy extraction of the cuspid and there will be a forward movement of the incisors. The development of the cuspid will press the alveolar process inward, thereby contracting the arch and the tardily erupted bicuspids will adjust themselves to the limited curve, as before stated. In this way the features of the two forms are combined, that is, a contracted or angular anterior arch and a posterior arch that is more or less concave. The opposite side may be V-shaped, saddle-shaped or normal (Figs. 60 and 61). Deformities of the dental arch are due first to

arrest of development of the jaw and, second, in the nature of the deformity to the order of eruption of teeth which rarely erupt (twice alike) is always local or mechanical. From an evolution standpoint these deformities are atavistic. The V-shaped reverts

Figure 58.

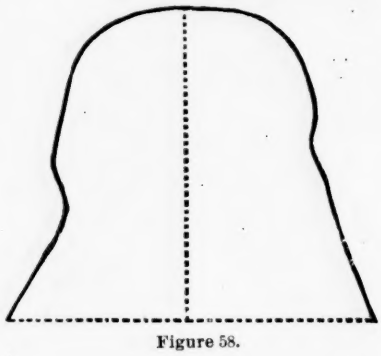
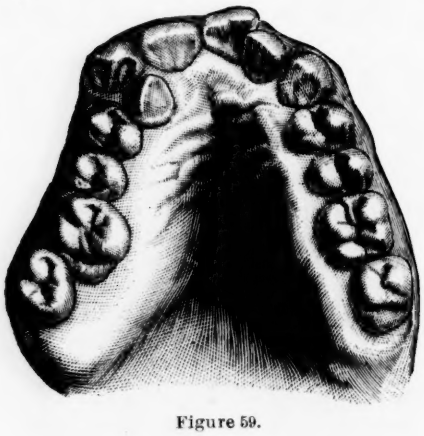


Figure 58.



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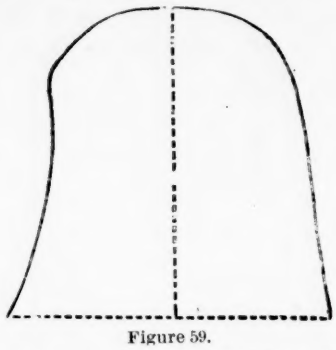

Figure 59.

to the reptilian type. The saddle-shaped to the mammalian. Dr. W. C. Barrett of Buffalo has frequently called attention to the shape of the anthropoid arch. In the gorilla, the nearest to man in dentition, there is a very distinct approach to the saddle shape. In the chimpanzee it remains. The orang-outang exhibits a less tendency. The arch of some of the cebidæ very nearly approaches man. It all depends upon the extent of prognathism. When that is reduced the arch appears, and rectangular arrangement of the

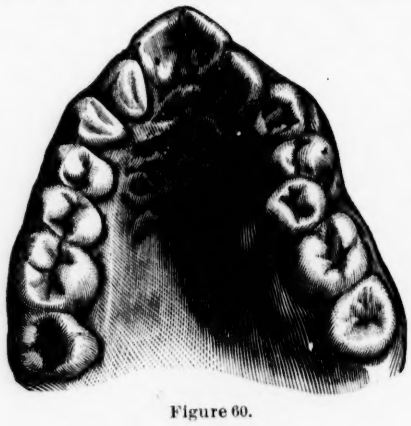

Figure 60.

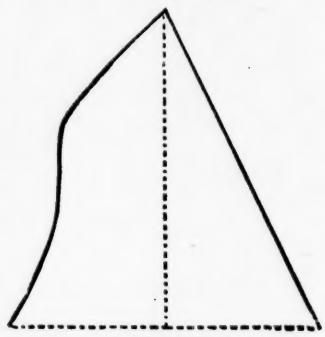

Figure 60.

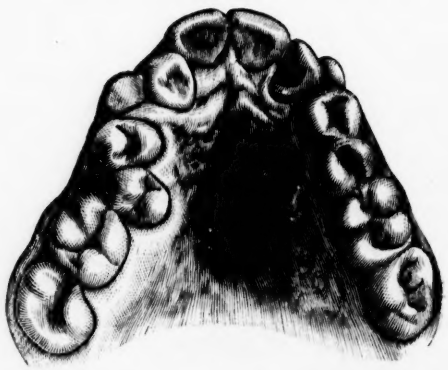

Figure 61.

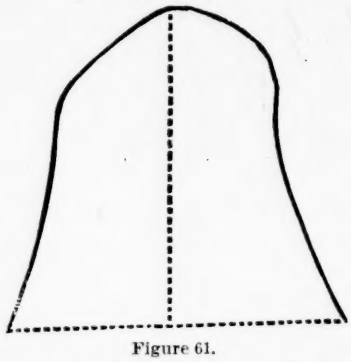

Figure 61.

teeth is lost. Most carnivora exhibit a distinct approach to the saddle shape. Some felines have a shortening of the jaw partially obliterating the tendency, but in most canidæ it is quite marked. From the standpoint of comparative anatomy, Dr. Barrett

is of opinion that the tendency toward the saddle-shaped arch is a reversion to earlier form.

These are facts which can not be overlooked, since from the very nature of development and eruption of the teeth they can not take any other form. The arrangement of the crowns of the cuspid (canine) in the jaw before eruption is such that no matter what the local condition of the jaws or teeth may be, the V or saddle-shaped dental arch must be produced.

In no symptom is degeneracy as evident as in the stigmata resultant on hypertrophy of the alveolar process. This occurs at all ages, but more particularly at the period of development of the permanent set of

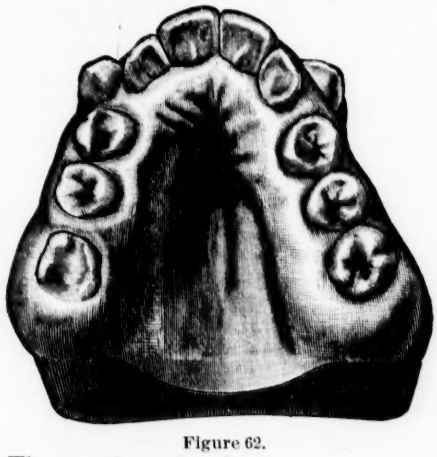

Figure 62.

teeth. The entire alveolar process may become involved (Fig. 62), or only a portion (Fig. 63).

Hypertrophy of the alveolar process is the result of irritation incident upon eruption and the shedding of

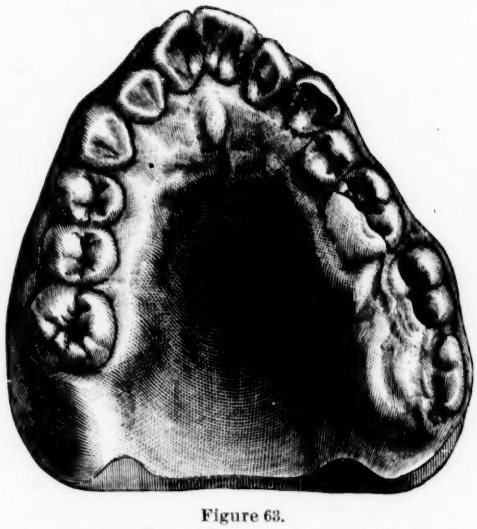

Figure 63.

the temporary teeth, and eruption of the permanent teeth.

Laryngologists, rhinologists and neurologists claim that certain vaults are deformities, when in reality the alveolar process had hypertrophied.

The jaws, as a whole, owing to an unstable and unbalanced nervous system, are liable to become excessively developed as well as arrested in development. Excessive development of the superior maxilla is evinced by a fullness of the upper lip. In these cases the upper maxilla is too large for the lower and stands out beyond it. The lower may be quite normal. When there is simply a want of proportion between the two jaws it is due to the diminutive or excessive size of one while the other is normal. The criterion in these cases must be the facial angle. The upper jaw is usually in harmony with the skeleton, while the lower jaw depends for its size largely upon function, its size being the result of accident rather than design.

When the upper jaw is normal or smaller than the lower, the extent of its posterior portion is determined by the occlusion of the first permanent molar, which keeps the alveolar process in permanent relation to each other at this point and allows freedom of development in front. If the occlusion is not normal, the upper jaw and alveolar process will develop laterally as well as anteriorly.

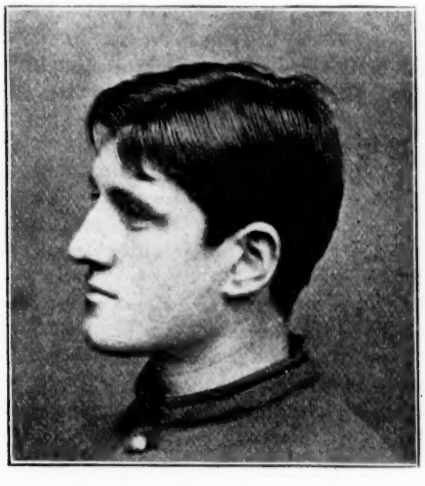

Figure 64.

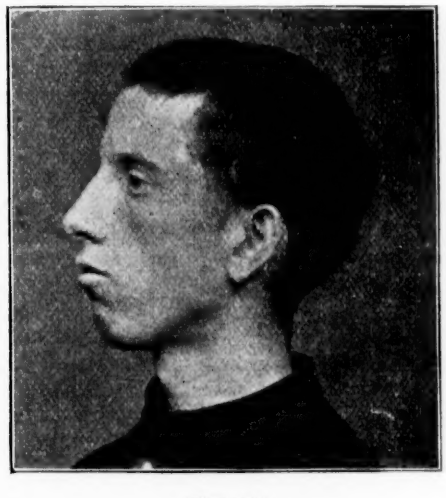

Figure 65

The teeth of the anterior columns may either stand vertically or they may be turned in toward the lower incisors. The latter defection is produced by the action of the lips. When the cuspids are in their normal position, the upper incisors form a larger arch than the lower, and this permits of their being turned inward, but when the cuspids have moved so far forward that they are not normally interlocked with the lower teeth, the incisors are too crowded to permit this. While the jaws are growing smaller the teeth tend to cause reversion to the original form.

Arrest of development of the superior maxilla is always associated with marked depression at the alæ of the nose producing the appearance of having been

hollowed out from a point at the floor of the orbit to the grinding surface of the lower teeth (Fig. 64). This is the most common type of degeneracy among criminals, and has frequently caused the error of assuming excessive development of the lower jaw, which is normal. And the seeming excess is due to arrest of development of the upper jaw. The lower jaw has in the scale of light gradually grown smaller. Even in some apes it is still large. The changes which have resulted in the negro jaw strikingly illustrate this alteration in size. The lower jaw of the early negro in the South was unusually large. The intermixture of white blood has decreased the size of the jaw until, where there is but a slight admixture of negro blood, the jaw is as delicate-shaped as that of the whites. Prognathism of both jaws of the negro arises from the fact that as the lower jaw is much larger in proportion than the upper, the force exerted by the lower against the upper carries the alveolar process and teeth in their formative process forward. This gives prominence to both upper and lower jaws, and its existence is easily demonstrated by examination of our large collection of negro skulls. In the evolution of the race the lower jaw becomes smaller and harmony results in form and size.

Arrest of the lower jaw (Fig. 65) is common among degenerates. This consists of a shortening of the body. Sometimes it is arrested to such an extent that there is apparently no chin. About 50 per cent. of criminals at Elmira, N. Y., had this deformity.

The following table shows the number of deformities of the jaws and teeth among some of the degenerate classes:

	Jaws.										Teeth.			
	Number examined.	V-shaped.	Partial V.	Semi V.	Saddle.	Partial Saddle.	Semi-saddle.	Normal.	Arrested development.	Excessive development.	Irregular.	Tubercles of teeth. Present.	Tubercles of teeth. Absent.	Regular.
Criminals at Pontiac, Ill.	465	75	71	3	66	63	16	171	. .	. .	123	13	452	342
Criminals at Elmira, N.Y.	1041	381	49	1	157	26	. .	422	. .	. .	220	26	1015	821
Criminals at Joliet, Ill.	468	13	79	19	59	92	24	163	. .	. .	. .	. .	. .	. .
Prostitutes at Chicago Bridewell	30	10	17	7	27	10	10	. .	1	. .	. .	. .	. .	. .
Insane at Dunning, Ill.	700	26	47	. .	12		. .	486	. .	. .	. .	. .	. .	. .
Insane at Kankakee, Ill.	613	69	107	29	89	105	61	153	. .	. .	. .	. .	. .	. .
Idiots, Imbeciles	1977	129	236	. .	207	. .	. .	1095	. .	. .	. .	. .	. .	. .
Deaf and dumb	1935	169	192	. .	203	. .	. .	901	. .	. .	. .	. .	. .	. .
Blind	207	7	9	. .	11	. .	. .	105	. .	. .	. .	. .	. .	. .
Inebriates[11]	514	1.5	24.4	0.3	9.3	13.2	7.7	25.4	. .	. .	. .	. .	. .	. .

[11] Per cent.

In conclusion, it may be mildly stated that if all structures are so affected as to cause harmony in all the parts, advance in evolution is going on, but if such conditions exist as noted above, degeneracy is resulting.[12]

[12] The illustrations for this article are taken from the following works: The International Dental Journal; The Dental Cosmos; Diseases and Injuries of the Teeth (Morton and Smale); The Osseous Deformities of the Head, Face, Jaws and Teeth (Talbot), with a number of original cuts.

Iridectomy in Russia.—Out of the 27,966 patients treated at the Kasan Eye Clinic during the last ten years, there were 769 cases of glaucoma. Iridectomy was performed in 189 cases. The sight remained unchanged by it in 56 per cent., was improved in 25.4 per cent., and grew worse in 18.6 per cent.

SELECTIONS.

Hemiplegia Following Typhoid Fever.—Dr. W. H. Haynes of Brooklyn, contributes to the *Bulletin* of the Johns Hopkins Hospital a case of this rare complication: F. L., aged 30, single, and a railroad switchman by occupation. His family history is unimportant and he had no illness, except a gonorrhea, till October, 1895, when he had an attack of typhoid fever, lasting twenty-one days, during the course of which his temperature rose as high as 105 degrees F., attended by delirium. On the fourteenth day his mother, who was nursing him, noticed that he did not move his left arm and leg as much or as well as the other, and that they felt dead and cold. When he began to get up he could not stand on account of the weakness (he termed it) of his left leg. Both upper and lower extremities felt numb. Face and speech not at all affected. No loss of sensation. Nearly entire loss of motion of upper extremity, but not so profound of lower. He remained in this condition for a couple of months, when improvement began, first noticeable in the leg, which became strong enough finally for him to stand upon and then to walk. He is a man of short stature, weighing 133 pounds. Face and speech show no lesion. Left upper extremity shows marked atrophy, with half the power and motility of the right; can use it to help dress himself, but not to carry anything. When he tries to raise up the elbow, suffers pain running down the outside of the arm from the shoulder and the elbow. No loss of sensation or of heat or cold. No dragging of left lower extremity, which is only slightly atrophied, with no loss of motion or sensation; only he says it gives out quicker than the other. Tendon reflex at knee more marked than on right limb. General health is good. Heart and urine normal. Electric contractility of upper extremity diminished. This case differs from the others reported as occurring in the left side instead of the right (he is a right-handed man), and there were no convulsions, aphasia or facial paralysis, but agrees with their subsequent history of slow repair.

Congenital Absence of Thymus; Autopsy.—Dr. A. Clark, in London *Lancet*, October 17, reports a case of absence of the thymus gland in a male infant eight months old. The child was apparently well at birth and did not begin to sicken until about the sixth month of its age, when coldness and swelling of the extremeties and a tallowy complexion made their appearance. The swelling gradually increased and spread in spite of diuretic and tonic treatment until the eyes were almost closed and hands, arms, feet and legs were so distended with fluid as to feel like a firmly stuffed cushion. Two symmetrical ecchymoses, one of the inner side of each supra-clavicular fossa and about the size of a florin, appeared. The temperature remained normal and the pulse and respiration grew weaker as death approached, but were in no way remarkable.

Necropsy.—At the necropsy, made twelve hours later, I found the right kidney healthy. The left was about twice the size of the right, and its pelvis and ureter were dilated, the latter to the size of the little finger and the former to contain about two fluid drams. There was no communication with the bladder on the left side, although the ureter was pervious as far as that organ. The thymus gland was completely absent, the upper part of the anterior mediastinum being empty and the pleuræ in apposition. There was no fibrous tissue to mark the position of the absent organ.

Remarks.—So far as I know, this condition of things is quite unique as regards the absence of the thymus gland, and is interesting as proving that it is compatible with fair health and normal development, at all events, for the first six months of life. The symmetrical ecchymoses arising without apparent cause harmonize with the recorded connection between this gland and hemophilia. I think that the renal abnormality only

contributed in a subsidiary degree to the fatal result, as the hydronephrosis was slight and the right kidney quite healthy and apparently adequate for the necessities of the body, for no uremic symptoms were present, and the urine passed was not deficient. There were no symptoms of acromegaly. The digestive functions improved under treatment and the appetite remained good to the last.

Renipuncture in the Treatment of Albuminuria.—Mr. Reginald Harrison in the London *Lancet*, October 17, is reported as having addressed the London Medical Society on the above subject. He said that certain cases of albuminuria had come under his notice in which he had performed an operation for the relief of some morbid condition which was supposed to exist, but was not found when the kidney was exposed; the symptoms, however, were relieved and the condition of the urine improved. This had led him to think that in certain cases of albuminuria good might result from puncture of the kidney.

He related three cases in which he had so exposed the kidney: 1, a boy aged 18 years was suspected of having suppuration around the kidney following scarlet fever. There was lumbar pain, and the urine was albuminous and contained casts. A small lumbar-incision was made and the kidney found to be tense and engorged. An incision was made through the capsule, and there was a full discharge of blood and urine; the wound healed the tenth day. The urine now became abundant, the albumin lessened, and then disappeared altogether, the boy making a good recovery. 2, that of a man aged 50 years who worked underground. He had presented symptoms of renal calculus for some time. Three months after being first seen his urine was constantly albuminous, and he had pain in the right lumbar region. The kidney was exposed, but no stone was found. The condition of the patient improved, the urine became normal, and the patient remained in good health. 3, that of a woman aged 44 years, who had had hematuria for one year and pain on pressure over the left kidney with albuminous urine at times. There was some history of her having passed a calculus at one time. A lumbar incision was made and the kidney was found to be swollen and tense. This was incised and free drainage of urine and blood ensued. The woman recovered, the urine becoming normal. The first of these cases he considered to be scarlatinal nephritis, the second to be due to cold, and the third a subacute attack following influenza. He then referred to two cases of movable kidney (published by Dr. Newman of Glasgow in the *Medical Week*, Jan. 6, 1896, p. 29) in which the albumin and casts which were present before the operation disappeared entirely after the kidney was fixed, and also to another case under the care of Dr. Hoeber of Hamburg, in which relief had followed incision into the right kidney. Having referred to the views of Sir Thomas Grainger Stewart and Sir Thomas Watson on the consequence of hyperemia in the initial stage of nephritis, he pointed out the disastrous effects which increase of tension produced in the eye and other organs, and the relief which resulted from operative interference. The editorial comment on Mr. Harrison's address will be especially interesting to those wide-awake surgeons who allow even a surprise to serve as an experience.

The editor says of the subject that it is a happy instance of the benefit which may be obtained from the careful consideration of unexpected results. Many times have surgeons cut down on the kidney in a patient with severe lumbar pain, albuminuria and other renal symptoms, in the expectation of finding a renal calculus or some other gross lesion, and have been disappointed, and yet when the wound has healed the symptoms of which the patient has complained have completely disappeared. The explanation that was usually given was that some constricting band had been divided or that the result was due to the effect of the operation on the mind of the patient; but there is much to be said in favor of the view put forward by Mr. Harrison that the result in some cases at least is due to the relief of tension. That increased pressure in the renal veins will lead to albuminuria and to a diminished secretion of urine has long been known. The explanation is less certain, though numerous theories are not wanting; but whatever theory we may adopt to explain the presence of the albumin, or even if we consider none of those advanced to be satisfactory, yet we can not doubt that the venous congestion does give rise somehow to the albuminuria, and in active hyperemia of the kidney albuminuria is no less certain. In other parts of the body more accessible than the kidney we can diminish congestion, whether arterial or venous in origin, by local blood-letting, so we have good *a priori* reasons for thinking that it is possible to relieve a congestion of the kidneys by punctures or incisions, and if this were done it can not be doubted that at least in some cases the albumin in the urine would disappear and the amount of urine excreted would increase. So many conditions that used to be considered wholly within the province of the physician have now come under surgical treatment that we can hardly be surprised at a further advance in the same direction, but no one anticipated that the aid of the surgeon would ever be invoked in acute nephritis and other allied pathologic conditions. The matter is of course, not yet one on which a decided opinion can be expressed, for the cases are too few, but the unsatisfactory results of the treatment ordinarily pursued in albuminuria and in suppression of urine from nephritis are amply sufficient to justify a method of procedure which promises so much.

PRACTICAL NOTES.

Improving the Shape of the Ears.—Joseph recently altered a boy's large outstanding ears by cutting out a wedge-shaped segment, fifteen degrees, of the upper ear muscle, making the circumference 1.5 cm. smaller.—*Therap. Woch.*, November 1.

Removal of Right Scapula and Caput Humeri.—On account of a spindle-celled sarcoma, Israel performed this operation on a clerk, who still retains the use of his arm to such an extent that he can write well and perform all his clerical duties.—*Therap. Woch.*, November 1.

Remedy for Spasmodic Uterine Contractions Occurring During Labor.—Tincture of iodin 2 grams, alcohol 4 grams. Take 5 drops of this mixture in half a glass of warm water every half hour. The uterine spasm will pass away after the second or third dose in the majority of cases, but possibly a fourth or even a fifth may be required. The sooner it is administered the greater its efficacy.—Müller, *Semaine Médicale*, October 24.

Case of Hypnotic Anesthesia.—Starck of Heidelberg reports several cases of severe operations performed without pain in hypnosis, among them the infraction of a deformed femur on a patient who had been long confined to his bed. He recovered consciousness during the operation and screamed, but was speedily put to sleep again. His talipes equinus, which was exceedingly painful to the slightest touch, was also corrected by massage in hypnosis, and after the infraction had healed the patient was able to walk with ease.—*Cbl. f. Chir.* October 17.

Traumatic Tetanus Cured by Phenic Acid.—Cervellini reports a patient of 68 years, brought to him the eighth day after the development of tetanus, completely cured in three weeks by subcutaneous injections of 2 per cent. phenic acid every two hours, with a full bath at 40 degrees C. lasting two to three hours morning and evening. He thinks that the disease imparts a tolerance of phenic acid so that large doses can be administered without fear.—*Semaine Méd.* October 14.

Gastro-enterostomy.—The Souligoux method described in the JOURNAL August 22, page 450, is reported "marvelous" by

Chaput, who has tried it. Souligoux has had six absolute recoveries with it in ten cases of cancer of the stomach. Picqué reports four successes with it in five cases, the one failure really due to another cause. Doyen, on the other hand, says that although buttons are defective, this method must be absolutely bad, adding however that he has had no personal experience with it. Several cases of cicatricial stenosis of the pylorus or esophagus consecutive to acid burns, have been reported recently abroad, entirely cured by anterior gastro-enterostomy.

Treatment of Umbilical Hernia in Infants.—Lobas's method of treating umbilical hernia does away with the necessity of bandages, which are so apt to slip out of place, while it does not interfere with bathing the child. He draws up a couple of cutaneous folds around the navel and closes them over it with a soft pad of absorbent cotton between, holding them in place with strips of diachylon, from one and a half to two centimeters wide and long enough to reach from side to side of the abdomen, reënforcing this support with a couple of vertical strips of sparadrap. He renews the dressing once or twice a week.—*Semaine Méd.*, October 14.

Keratolytic Effect of Sodium Chlorid.—Simonelli has been investigating the effect of sodium chlorid on ulcers and finds that it has a most surprisingly beneficial action in producing healthy granulation, but that it fails to cause any growth of skin which must be secured by supplementary treatment. Several cases of torpid varicose swelling of several years' standing, were sprinkled with fine salt, when an abundant granulation ensued, proving it a highly efficient dermoplastic remedy. It causes smarting and burning at first, almost unbearable in some cases, but this is avoided by adding menthol to it in the proportion of 25 to 5, or 50 to 25.—*Gaz. degli Osp. e delle Clin.*, September 20.

Cardiac Disease in Children.—Dr. Pott in the "Fortschritte der Medicin," after a thorough sifting of some ninety-five cases, strongly corroborates the view that acquired heart disease is never primary, but always secondary to some acute infectious disease, particularly scarlet fever, acute rheumatism and occasionally pneumonia. In early childhood the rarity of scarlet fever diminishes its importance in the causation of heart disease, while rheumatic fever is the commonest cause in such early years; of seventy-eight cases of acute rheumatism with joint, twenty-one were under the age of 2 years. But a frequent cause of this ailment in children is the so-called masked rheumatism, a vague febrile condition associated with naso-pharnygeal catarrh, enlarged cervical glands, enlarged spleen and pains in the limbs, sometimes called herpetic fever.

Treatment of Pneumonia.—On the authority of Dr. George Hayem it appears that any nitrite in large doses is much less dangerous in this case than is commonly supposed. He finds that it transforms hemoglobin in the globule itself into methemoglobin without destroying the anatomic elements, without giving rise to globular anemia of alteration of the blood by globular debris. At a single treatment an adult can inhale from a compress held at half an inch from the nose 60, 80 or even 100 drops, in many cases a single inhalation being sufficient, in others two daily, morning and evening. This treatment is harmless and can be continued during the course of the disease and for two or three days after defervescence. It changes neither the duration of the disease nor the temperature range but relieves the dyspnea, liquefies the expectoration and diminishes the auscultatory signs.

Oligemia as a Cause of Death in Pneumonia.—Dr. Bollinger of Germany holds that croupous pneumonia is a typical local infectious disease, pursuing in the main a regular course, and that it is not essentially dangerous on account of the duration or the intensity of the fever. The impairment of the function of the lung he maintains is likewise insufficient to explain death, nor is the frequent edema in the spared parts of the lung the result of a passively increasing collateral hyperemia, but of cardiac embarrassment. He declares that the collapse symptoms are dependent upon oligemia, which leads to impaired nutrition of the cardiac muscle, already weakened by the fever and the extra demands upon it. Anemia of the brain, too, by causing disturbance of cardiac innervation, may be an additional factor. The exudate into the lung tissue may be likened to a venesection by the pneumococcus, which in a few days deprives the blood of a large quantity of important constituents. The reason, he says, why death takes place so early, and usually in the same stage of the disease, *i. e.*, from the sixth to the eighth day, is probably because the exudate must attain a certain acme before life is imperiled. By applying these facts to therapeusis it follows that beside the usual treatment every effort should be made to counteract the oligemia.

Filmogen in Dermato-therapeutics.—Collodium and traumaticin irritate the skin and fail to resist external influences, while they do not take up all medicaments. A solution of acetin and a preparation of collasin are used in the Paris clinics as a vehicle for cutaneous medication. Filmogen is a solution of nitrocellulose in acetone, with the addition of a little oil to prevent irritation. It forms a whitish or yellowish coat which does not irritate nor prevent the movement of the parts and is not dissolved by water, but is easily washed off with alcohol or ether. It prevents staining from the medicines used, while they produce the same effect as when used in the form of salve. It is especially adapted for use on dry dermatoses, as the acetone causes smarting on moist surfaces. A large number of medicaments are soluble in filmogen and the rest mix with it sufficiently for the purpose. As a smaller quantity is required than of collodium, the actual expense is no greater.—*Therap. Woch.*, November 1.

Section of the Cervical Sympathetic in Exophthalmic Goitre.—As mentioned in the JOURNAL, September 5, Jaboulay has successfully performed this operation, and Abadie remarked at the recent French Congress of Surgery, that all the symptoms of the disease seemed to indicate that it was due to a permanent excitation of the vaso-dilating fibers of the cervical sympathetic or to their nuclei. The turgescence of the thyroid arteries leads inevitably to hypertrophy of the gland, which is thus secondary and not primary. The dilatation of the retro-bulbar vessels produces exophthalmus, while tachycardia, we all know, can be and is caused by excitation of the sympathetic. Consequently section of the sympathetic should theoretically cure the disease, and experience has shown that it does conquer the exophthalmus, but how are we to get at the special nerves that are reponsible for the hypertrophy of the thyroid gland and the tachycardia? He suggested that possibly the cures obtained by ablation of the gland were really due after all to the mere fact that the proper nerve was divided. Jonnesco stated that he has several times cut the cervical sympathetic and believes that the operation has a future. Kocher has also secured several permanent successes with it.

Treatment of Hemoptysis.—The *Journal de M. de Paris*, of October 25, describes Capitan's method of managing hemoptysis as follows: Immobilise the patient, with his head elevated. Apply sinapisms to the lower members. Give him pieces of ice to suck, and if possible make him swallow a spoonful of ether in a little sweetened water. Then inject immediately a Pravaz syringe of the following solution: Yvon ergotin 5 grams; morphin hydrochlor. 0.04 gram; antipyrin 1.50 grams; spartein sulphate 0.20 gram; atropin sulphate .002 gram; aqua dest. q.s. for a total vol. of 10 c.c. F. s. a. solution. The injection should be made deep and preferably in a muscle. It can be repeated from half hour to half hour, or

every fifteen minutes, if the danger is urgent, but not more than four or five syringes full in all. If the patient can swallow, give every half hour a tablespoon of the potion: Bongean ergotin 3 grams; gallic acid 0.50 gram; syrup of turpentine 120 grs. F. s. a. potion. Cupping is also useful if it can be managed, applied in several places, and also bags of hot water or bags of ice applied locally or at a distance.

Potassium Nitrate in the Treatment of Burns.—The *Lancet* has an annotation stating that Dr. Poggi has found that the addition of a few teaspoonfuls of potassium nitrate to a bath, into which the burnt part is plunged, will quickly cause cessation of the pain. After a time the water becomes heated and the pain returns, but again subsides on the addition of another quantity of salt. Professor Vergely has obtained good results by covering the burnt parts with a paste prepared by mixing calcined magnesia with a certain quantity of water and allowing it to dry on the skin, renewing it as soon as it becomes detached. Under this treatment it is said that the wounds heal well and pain is prevented.

Organic Alterations in Chloroform Narcosis.—The discussion of chloroform *versus* ether, has entered upon a new phase of late, with the histologic study of the subject. Ajello of Palermo adds an important contribution by an article published in the *Gazetta d. Osp. e d. Clin.* of October 25, describing the results of his clinical observations and investigations, as well as of an extensive series of experiments. Chloroform determines acute parenchymatous alterations of varying intensity and degree, of an inflammatory and degenerative nature. The parts most affected are the kidneys, the liver, the heart, the striated muscles, the spleen, the blood and the vascular system. These alterations are not characteristic of chloroform alone, but are also produced by any intoxication of the system, generally as a consequence of some infective disease. The degree and intensity of the alterations depend directly upon the amount of chloroform administered, and the length of the narcosis. They usually terminate by *restitutio ad integrum* of the organs affected, but they are capable of producing death, principally by uremic intoxication. Occasionally they continue a course of involution, and become chronic.

Significance of Suppurations of the Ear.—The growing importance ascribed to suppurations of the middle ear at the recent surgical congresses, especially the Paris congress, recalls the career of appendicitis. The danger of serious cerebral complications is now so generally recognized that the hitherto insignificant otorrhea is now receiving an unprecedented amount of attention. Surgeons no longer allow pus to remain in the mastoid cells, and we know that there is always pus in the mastoid when it is *en evidence* in the middle ear, with only a thin bony plate separating it from the meninges, the brain, etc., any more than they allow it to remain in a tibia or humerus. The only question now is early diagnosis of the possible cerebral complications, and the best methods of procedure. Broca trephines the apophysis and tympanum, opening the temporal fossa above the roof of the aditus ad antrum, to drain a cerebral abscess. He finds that all the complications vanish simultaneously with this treatment, which is an urgent argument in favor of the mastoid route. Schwartz recently sutured the lateral sinus in a traumatic case, but this would scarcely be prudent in an infective mastoiditis.—*Prov. Méd.*, October 31.

Substitution of Eucain for Cocain.—Legueu has found that six centigrams of cocain will kill a guinea pig in three-quarters of an hour, while eight centigrams of eucain require twice this length of time to produce death in another animal of the same size, showing the less toxic properties of the latter. It is fully equal if not superior to cocain in producing anesthesia, and for these reasons he has adopted it for local anesthesia in preference to cocain, especially for the urinary apparatus. He uses a hundredth solution and never injects into the urethra or under the skin more than five to six centigrams, following in all respects Reclus's advice for the administration of cocain (see the JOURNAL, Nov. 7, page 1012). In cystoscopy he uses a five-hundredth solution, of which he injects 160 to 200 grams into the bladder. He adds that eucain has a strongly congestive effect, which contra-indicates its use in cases where there is much bleeding.—*Bulletin Médical*, November 18.

Parenchymatous Injections of Carbolic Acid in Affections of the Tonsils.—Kramer reports most favorably on the results of treating the chronic relapses of tonsillary affections, which render life comparatively a burden to the patients with their frequency and the gravity of the accompanying disturbances, with four to six injections of about ½ c.cm. of 2 to 3 per cent. carbolic solution, in the course of two or three weeks. The injections were made with a Pravaz syringe at different points in the pillars of the fauces, after cocainization. Fifteen patients have now been freed of their tonsillary troubles for two and one-half years, and numerous others for a shorter period. There were no inconveniences from its use and the unfailing success of the treatment in preventing relapses in so many cases can not be a mere coincidence.—*Cbl. f. Chir.*, November 21.

Analgen in Infantile Therapeutics.—Moncorvo of Rio Janeiro has been testing the effects of analgen (ortho-ethoxy-anamonobenzoylamidoquinolin), in fifty-nine cases of infantile diseases, among them thirty-three cases of malaria. No inconveniences followed its use in any case, even in doses much higher than those heretofore attempted (25 centigrams to 3 grams in twenty-four hours), and improvement occurred in all, merely varying in its promptness. The fever subsided in the malarial cases, especially, with all the nervous symptoms. Its insipid taste renders it easy to administer, and in cases where for any reason it is impossible to give quinin, analgen promises to take its place very effectively. The soothing and antipyretic effect in acute and subacute tuberculosis was also marked, and the same favorable results were attained in acute lymphangitis and arthro-synovitis, while a case of Sydenham's chorea was promptly cured, and epilepsy much relieved. It also relieved the pain more or less in the neuralgia of Pott's disease, coxo-tuberculosis, etc. Full details of the treatment and cases are given in the *Bulletin* of the Paris Academy of Medicine of November 10.

Surgical Intervention in Peritonitis accompanying Typhoid Fever.—Dieulafoy presented an important paper on this subject at the meeting of the Paris Acad. de Méd., October 27, in which he stated that the current of modern progress is sweeping into the domain of surgery what used to be considered exclusively the patrimony of medicine. Especially is this true of peritonitis, even to the peritoneal complications of typhoid fever. He described the peritonitis from perforation which appears during the course or relapses of typhoid fever. The perforation may be in the ileum, the cecum, the appendix or the colon. It is not restricted to severe forms of the disease, but appears as often, perhaps, in the mild cases. The one unmistakable and most important symptom is the abrupt fall of temperature, descending to hypothermia. This striking drop of the temperature occurs also with sudden intestinal hemorrhage, but in this case it rises again as high or higher than before, while in case of perforation in remains low, but without chills. The prognosis of peritonitis from perforation is extremely grave, but cases are known in which it was controlled by the prompt formation of adherences, which closed the perforation in time. There is also the para-typhoid appendicitis, which usually appears during the latter period or convalescence of typhoid fever. It is generally accompanied by a rise of temperature, which distinguishes it from the perforation peritonitis and proceeds in its evolution like an ordinary appendicitis. The

infective process may be limited to a singular appendicular attack, without any peritonitis, or it may, with or without secondary perforation of the appendix lead to all the complications of appendicitis: Encysted peritonitis, generalized peritonitis, abscesses in the liver or elsewhere, etc. He adds that what used to be called peritonitis by propagation (passage of the bacilli through the walls of the intestine without perforation), does not exist. Not until a closed cavity is formed by an ileus, volvulus or closing of the appendix by a calculus or something of the kind, do the bacilli acquire sufficient virulence to penetrate the intestinal walls. (Dieulafoy is the advocate of the closed cavity theory of appendicitis.) The medical treatment of these two forms of peritonitis is to attempt to keep the intestines perfectly quiet, so as to modify or prevent the passage of septic matters into the peritoneum, and facilitate the formation of adherences. No food is allowed, nor drink; the patient is not permitted even to swallow the water that dissolves from the few pieces of ice given him to hold in his mouth. Two centigrams of opium extract are administered every hour, with injections of morphin if necessary, and bags of ice are applied to the abdomen, suspended so as to relieve him of their weight, or else the abdomen is covered with refrigerating compresses congealed by evaporation of methyl chlorid. But these medical measures are often impotent, and the question of surgical intervention then arises. The patient is in such a poor condition to undergo an operation, the intestines are in such a bad state, that intervention seems audacious to say the least. In the para-typhoid appendicitis the conditions are more favorable, as the operator has no ulcerous intestine to suture, only the appendix. In perforated peritonitis however the diagnosis is difficult, but an operation offers some chances of saving the patient if the proper moment for intervention can be determined. He described a case of the kind in which his laparotomy had been followed by death in a short while, but the necropsy showed successful cicatrization of the suture of the perforation, and that the fatal result was due to a second and third later perforation. He concludes therefore that in spite of the ulcerated condition of the intestines the suture heals and surgical intervention is thus justified.

Lutaud's Treatment of Obesity in Women.—Women require a different kind of treatment, on account of possible peri-uterine adherences, from what is indicated for men. Lutaud's course is fourfold: Medical, dietetic, local and hygienic; all applied simultaneously, and it has proved very successful. He finds that scammony is the purgative best adapted to these cases. It causes a rapid decrease in the size of the stomach and abdomen and is very active, taking effect in four or five hours, so the patient should be notified. His formula is: Scammony one gram; oil of anise one drop; to be made into a powder and taken at night, toward midnight. Repeat the dose every two or three days, or less frequently as may be indicated. In the morning immediately before eating, he orders a wineglass of some purgative water, such as Carabana or Janos, or a teaspoon of the following powder in a little water: Powd. senna leaves, cream of tartar and sublimed sulphur, āā 3 grams; powd. illicium 2 grams; sugar 40 grams. The nights when the scammony is omitted he orders a tablespoon of the following: Potassium iodid 10 grams; extract of fucus vesiculosus 5 grams; syrup of orange peel 190 grams. In some cases he substitutes 20 centigrams of opium extract for the fucus, as the effect of the opium on the system allows the patient to do with less food without inconvenience. He adds that the trials of Baumann's thyroiodin enable us to recommend it in cases of obesity. The dose varies from 1 to 4 grams a day, according to the tolerance of the patient. The tablets are the easiest administered. He has adapted the dietetic part of his treatment to conform to feminine tastes and habits, simplifying it as much as possible, and only insisting that women should eat often, four or even five times a day; avoid heavy meals and give up altogether the use of butter and effervescing beverages. For breakfast, 7 to 9, he advises about 50 grams of meat, toast or rolls at discretion, and a cup of coffee without milk; no butter. For lunch, between 11 and 1, meat at discretion, an egg, cheese, 50 grams of toast or rolls, and a cup of tea with or without milk. At 5 o'clock, tea or a glass of wine, with a cracker. Dinner between 7 and 8; no soup, but fish and meat at discretion, salad, 50 grams of vegetables, cheese, 50 grams of toast or rolls, a fruit and a glass of pure Bordeaux or Burgundy. Supper between 11 to 1 A.M.; a glass of Madeira, a slice of cold meat and a cracker; this meal is optional. The local part of the treatment is very important when there are uterine or peri-uterine complications. It consists of scientific massage of the abdominal and lumbar regions, and especially of the uterus and adnexa, when they are adherent to neighboring organs. It can not be applied if there is inflammation, until it has partially or entirely subsided. It should be kept up perseveringly for a long while, especially in the case of women who are unable or unwilling to walk or take physical exercise. Unfortunately, exercise, the most valuable part of the treatment, is the most difficult to enforce. He has a gymnastic apparatus (Swedish) installed in the apartment, or better still, sends the patient to a special establishment, where she is directed and stimulated. He orders the bicycle whenever practicable, and has seen great benefit derived when women have been enticed from their oriental torpor by its use. The course is completed by the Turkish bath, followed by the douche and massage, which he always finds acceptable to the patient, unless there are special contra-indications. He adds that a stay at a sanitarium or "cure" is excellent, as it removes the patient from her usual environment, and favors the application of the entire course of treatment. He advises the alkaline sulphate waters.—*Jour. de Méd. de Paris*, November 1.

SOCIETY PROCEEDINGS.

Chicago Pathological Society.

Annual Meeting, May 11, 1896.

The President, Dr. WELLER VAN HOOK in the Chair.

THE SURGICAL TREATMENT OF TUBAL PREGNANCY WITH REPORT OF A CASE.

A paper with the above title was read by Dr. LOUIS J. PRITZKER. The case was that of a woman aged 28, married, who gave birth to a child two years before coming under the author's observation. Her previous history was otherwise unimportant. She menstruated last, July 10, 1895. About six weeks later she began feeling pain in the left iliac region; on August 23 she suddenly went into collapse. Dr. T. A. Davis made a diagnosis of ruptured tubal pregnancy and sent her to the Cook County Hospital, where the author operated on August 24, at 5 P.M. There was found an interperitoneal hemorrhage which seemed to come from the left tube and which was controlled by ligation of the tube close to the uterus. The left adnexa were removed, the right were healthy and were not disturbed. The rent in the tube was situated in superior wall at the middle third, and here there was a small placental mass. No corpus luteum was found in the ovary. There was a small ovum found in the tube, appearing from four to six weeks in age. An uninterrupted recovery occurred.

Dr. JAS. DORLAND presented a specimen of extra-uterine pregnancy which he had removed from a woman 20 years old, by laparotomy. Six weeks after her last menstruation she began to flow very much, and a small swelling the size of an orange was found on the right side of the uterus. The uterus was curetted and an expectant treatment was pursued and the swelling grew smaller, but suddenly she collapsed, the swelling became boggy and increased in size. Laparotomy was made, intraperitoneal hemorrhage found, and a sac containing a fetus removed. The patient is progressing nicely six days after the operation.

Dr. BYRON ROBINSON—The thing of interest to me is that I have never seen nor heard of a case of extra-uterine pregnancy in the lower animals. I notice that Bland Sutton mentions the same fact.

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INFORMATION WANTED.

It would greatly facilitate the prompt delivery of the JOURNAL to those members of the ASSOCIATION living in large cities, if they would kindly furnish this office with their street address in those cases where it is omitted from the wrapper of their JOURNAL, as we have been notified by the postmasters of the larger cities that second-class mail matter not having street address, would be placed in the general delivery to await call.

SATURDAY, DECEMBER 12, 1896.

THE PHILADELPHIA MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

The fact that the AMERICAN MEDICAL ASSOCIATION will hold its next annual meeting in Philadelphia, thereby celebrating the semicentennial of its existence, is of interest not only to those members of the profession who already belong to the ASSOCIATION, but to those, and we believe there are many, who are desirous of entering its ranks and thereby aid in maintaining the professional standard which has so long and so successfully waved over the medical profession of this country. Fifty years ago next spring under the presidency of Dr. JONATHAN KNIGHT of Connecticut, the first great medical convention of the United States met in Philadelphia and appointed as its secretary, Dr. ALFRED STILLÉ of that city. It also appointed as chairman of the committee on scientific papers Dr. OLIVER WENDELL HOLMES, and under the guidance of these men, well known in medicine and literature, the ASSOCIATION gained a vitality which it has never lost. It is interesting to note that at the Philadelphia meeting both Dr. NATHAN SMITH DAVIS, the organizer, and Dr. ALFRED STILLÉ, the secretary, of fifty years ago, will probably be present, as both gentlemen, notwithstanding their advanced years, are both in unusually good health. Aside, therefore, from the interest which centers around the semicentennial gathering, the members who attend this meeting will have an opportunity of meeting these standard-bearers and of linking together the past and the present in American medicine. This interest is increased when it is remembered that during the sixty years in which Dr. ALFRED STILLÉ has been a Doctor of Medicine he has seen more wonderful changes take place in the character of medical science than has ever been seen in a corresponding period of sixty years before our time. It seems curious that sixty years ago, at the time when he graduated in medicine, no true distinction had yet been made between typhus and typhoid fever and that the pathology of this disease, which is unfortunately so prevalent, remained an almost unknown quantity for the medical mind. Again, we remember that STILLÉ was a student in Paris about, or very shortly after, the time when LOUIS was putting his imprint upon his students the American investigators, who afterward aided him so materially in separating these two diseases, and that in the wards of large hospitals in Philadelphia STILLÉ carried out investigations and wrote papers in connection with this and other infectious diseases which have long since become classics in the literature of medicine.

Again, the fact that Philadelphia was for so many years the medical center of the United States in more senses than one, surrounds this meeting with unusual importance. Throughout the entire century not only have her medical schools turned out men of extraordinary success and ability, but her graduates have placed American medicine in the very front rank. It was from this city that the first medical diploma was granted in America by what is now the Medical Department of the Univesity of Pennsylvania, and it was from the Jefferson College that MARION SIMS, THOMAS ADDIS EMMET, BATTEY and GOODELL graduated and then put their stamp for all time upon gynecology. Jefferson also graduated SAMUEL D. GROSS, than whom no American has been more highly honored by foreign bodies of learning.

Not far from the place of meeting stands the Pennsylvania Hospital, the oldest institution of its kind in the United States, which possesses not only a quaint interest from its history but much scientific interest from the manner in which it has kept abreast of all that pertains to advanced medicine and surgery, and in the Philadelphia Hospital, with its 1,500 beds, may be found almost every type of disease which is met with in the temperate zone. In addition to these hospitals there are many other large hospitals within easy reach of the place of meeting, in all of which the visitors to the ASSOCIATION meeting will find members of the staff constantly on duty for the purpose of entertaining them and exhibiting the interesting and valuable cases, which can only be found gathered together in a great metropolis.

Finally, it seems to us that the occasion of this semicentennial meeting is one which should be embraced by each and every member of the ASSOCIATION to do missionary work among his fellow-practitioners, with the object of having them add their

names to the membership roll, a roll which is a highly honorable one and which must through the very nature of things materially preserve the honor and standing not only of the profession as a whole, but of each individual practitioner. We append a statement from the permanent Secretary showing the places of meeting from the beginning.

The places of meeting are as follow:

Convention met in New York, May 5, 1846; in Philadelphia, May, 1847, and resolved itself into the AMERICAN MEDICAL ASSOCIATION. The ASSOCIATION met May, 1848, in Baltimore; in Boston, May, 1849; Cincinnati, May, 1850; Charleston, in May, 1851; Richmond, Va., May, 1852; New York, May, 1853; St. Louis, Mo., May, 1854; Philadelphia, May, 1855; Detroit, Mich., May, 1856; Nashville, May, 1857; Washington, May, 1858; Louisville, Ky., May, 1859; New Haven, Conn., June, 1860; Chicago, June, 1863; New York, June, 1864; Boston, June, 1865; Baltimore, May, 1866; Cincinnati, May, 1867; Washington, May, 1868; New Orleans, May, 1869; Washington, May, 1870; San Francisco, May, 1871; Philadelphia, May, 1872; St. Louis, May, 1873; Detroit, June, 1874; Louisville, May, 1875; Philadelphia, June, 1876; Chicago, June, 1877; Buffalo, June, 1878; Atlanta, May, 1879; New York, June, 1880; Richmond, Va., May, 1881; St. Paul, Minn., June, 1882; Cleveland, June, 1883; Washington, May, 1884; New Orleans, April, 1885; St. Louis, May, 1886; Chicago, June, 1887; Cincinnati, May, 1888; Newport, R. I., June, 1889; Nashville, May, 1890; Washington, May, 1891; Detroit, June, 1892; Milwaukee, June, 1893; San Francisco, June, 1894; Baltimore, May, 1895; Atlanta, May, 1896. W. B. ATKINSON, Secretary.

THE DEATH OF FALSTAFF.

The editorial remarks in the *Chicago Sunday Tribune*, December 6, and the *Chicago Chronicle* of the same date, concerning the Shakespearean account of the death of FALSTAFF, and the various suggestions for emendations of the text therein quoted prompt us to remark that the description of the death scene is clearly taken from HIPPOCRATES' "Prognostics," and that the "facies Hippocratica" is well described. ADAMS' translation of the passage is: "A sharp nose, hollow eyes, collapsed temples; the ears cold, contracted and their lobes turned out; the skin about the forehead being rough, distended and parched;" (Prognostics, ¶ 2), and again: "When . . . . the hands are waved before the face, hunting through empty space as if gathering bits of straw, picking the nap from the coverlet, or tearing the chaff from the wall, all such symptoms are bad and deadly," *ibid.*, ¶ 4. "It is a bad symptom when the head, hands and feet are cold," *ibid.*, ¶ 9. And again in "Epidemics," Book 1, ¶ 2: "Most persons delirious when near death."

The babbling of FALSTAFF was simply an evidence of that delirium, which when taken in connection with the other symptoms betokened approaching death. The Shakespearean description is therefore correct, whether viewed from a realistic standpoint or from that of classic writings.

Celsus on Medicine, Book II, ¶ VI, says:

"Ad ultima vero jam ventum esse testantur, nares acutæ collapsa tempora, oculi concavi, frigidæ languidæque aures et imis partibus leniter versæ; cutis circa frontem dura et intenta, color aut niger aut perpallidus; multoque magis, si ita hæc sunt, ut neque vigilia præcesserit, nec ventris resolutio, neque inedia. Ex quibus causis interdum hæc species oritur, sed uno die finitur; itaque diutius durans, mortis index est."

(To witness that the extreme has come these attest: sharp nose, sunken temples, hollow eyes, ears cold, languid and gently turned in the lowest parts; the skin about the forehead hard and stretched, the color either black or very pale; much more so if these signs have come without preceding wakefulness, purging or fasting. From which causes these appearances sometimes arise—but they vanish in one day, so that if it continue longer it is an index of death.)

Lucretius (Book VI) "*De Rerum Natura*," gives the same signs, as follow:

"A pedibusque minutatim succedere frigus
Non dubitabat: item ad supremum denique tempus
Compressæ nares, nasi primoris acumen
Tenue, cavati oculi, cava tempora, frigida pellis,
Duraque: inhorrebat rictum, frons tenta meabat,
Nec nimio rigida post strati morte jacebant."
Etc., etc.

(The cold glides insensibly from the feet to the other parts of the body; but when the patient makes his last effort, the nostrils are compressed, the *nose becomes pointed*, the eyes sunken, the temples hollow, the skin cold and hard, the grinning mouth begins to quiver, the forehead stretches and is at last penetrated by the cold of death.)

SHAKESPEARE'S description is as follows:

"'A parted e'en at the turning 'o the tide; for after I saw him fumble with the sheet, and play with flowers, and smile upon his fingers' ends, I knew there was but one way; for his nose was as sharp as a pen, and 'a babbled of green fields. How now, Sir JOHN! quoth I; what, man, be of good cheer. So 'a cried out—GOD, GOD, GOD! three or four times; now I, to comfort him, bid 'a should not think of GOD; I hoped there was no need to trouble himself with any such thoughts yet. So 'a bade me lay more clothes upon his feet; I put my hand into the bed, and felt them, and they were as cold as any stone; then I felt to his knees, and so upward and upward, and all was as cold as any stone."

SHAKESPEARE, with that perfect acquaintance with classic models that characterizes his technical work, simply described a death scene, and when FALSTAFF is spoken of as babbling, he gave a sign of delirium. It was quite immaterial whether the babbling were intelligible or not, the wild and ever changing fancies that come with the deepening delirium of death, need no articulate language, and indeed whatever be said at such times, the language finally passes into incoherent and meaningless sound. "The fumbling with

the sheets," and playing with imaginary flowers, is another sign of delirium mentioned, as already quoted, by HIPPOCRATES. "When the hands are waved before the face," etc., then such sign is "bad and deadly." In the face of such facts, the contentions of Mr. THEOBALD and Mr. LOCKE RICHARDSON whether the text should properly read "green fells," "green fields" or "green baize" are calculated to raise a smile.

AIR EMBOLISM IN CONNECTION WITH PLACENTA PRÆVIA.

Death may occur in labor or shortly afterward from a variety of causes, such as heart failure, pulmonary embolism, air-embolism, uterine or other hemorrhage, rupture of the uterus, of the heart, of other important viscus or of an aneurysm or of an abscess, etc. The entrance of air into the uterine veins during or following labor may take place spontaneously, though often it has followed injections into the uterus and other manipulations about the birth canal. In a small number of cases a similar event may follow the formation of gas in the uterine cavity as a result of decomposition. The accident is almost invariably fatal, so that every precaution should be observed, so far as possible, against its taking place.

The occurrence of air-embolism in connection with placenta prævia has not hitherto been frequently observed, although a small number of cases have been recorded within recent years. KRAMER (*Zeitschrift für Geburtshülfe und Gynäkologie*, B. xiv, H. 2) reported two cases in 1875, KRUKENBERG (*Centralblatt für Gynäkologie*, 1892, p. 169) one in 1892, and HEUCK (*Zeitschrift für Geburtshülfe und Gynäkologie*, 1894, p. 140) one in 1894. To this number LESSE (*Zeitschrift für Geburtshülfe und Gynäkologie*, B. xxxv, H. 2, p. 184) adds a fourth, which occurred in a quartipara, of whose previous labors the first had terminated spontaneously, the second with the aid of forceps and the third in version. Repeated uterine hemorrhage in the ninth month of pregnancy led to the discovery of placenta prævia, with the fetus occupying a partially transverse position. The hemorrhage was controlled by means of tampons and in a short while feeble labor-pains set in and these were followed by renewed bleeding.

As the labor progressed slowly, in order to prevent a repetition of the hemorrhage and likewise to expedite parturition version was undertaken. To overcome muscular resistance gentle chloroform-narcosis was induced. The membranes were ruptured, two fingers introduced into the uterus and a foot brought down into the cervix. The pulse at once disappeared and respiration halted for a moment, while the patient became cyanotic, but did not lose consciousness. Ether was injected subcutaneously, infusion of saline solution practised and artificial respiration instituted, but despite most active efforts continued for five hours the fetal heart sounds were lost and the patient finally succumbed. Upon opening the right auricle under water after death a considerable number of large and small bubbles escaped and section of the lungs permitted the escape of bloody foam, while blood and bubbles could be expressed from a number of small pulmonary arteries. Anemia and chloroform-intoxication were excluded as causes of death and post-mortem decomposition as the factor responsible for the presence of gas in the heart and pulmonary vessels; and the conclusion was reached from a careful weighing of the evidence that death had resulted from the entrance into a uterine vein, at the site where the placenta had become prematurely detached, of air admitted into the uterus through the intermediation of the manipulations required to perform version.

THE DIAGNOSIS OF TWIN PREGNANCY.

While the recognition of multiple pregnancy is at times comparatively easy it is at other times extremely difficult, if at all possible with certainty. It will be appreciated that in a given case the diagnosis may be of the utmost importance, as upon its correctness will depend the outcome of the pregnancy, the safe delivery of the product of conception and perhaps also the life of the mother. In a failure to distinguish a duplication of the fetal members the diagnosis may remain undeterminable until labor has begun or even progressed to quite an advanced stage. PAJOT contended that the obstetrician could be certain of the existence of twins only when after the birth of one fetus another was found yet in the uterus.

The existence of twin pregnancy is rendered probable by unusual and irregular enlargement of the abdomen, by the occurrence of fetal movements in different parts of the abdomen and with increased activity and by an exaggeration of the usual concomitants and disturbances of pregnancy. The diagnosis is assured if pulsation of the fetal heart can be heard with maximum intensity in two different situations and without synchronism, as was first pointed out by KERGARADEC. In the determination care must be exercised to exclude the mother's hearts sounds as well as those of the observer. To further eliminate the possibility of error AHLFELD has proposed simultaneous auscultation of the abdomen by two different observers, and in a recent communication (*Zeitschrift für Geburtshülfe und Gynäkologie*, B. xxv, H. 2, p. 180) he details experiences in which the employment of this diagnostic adjunct proved of the utmost service.

A woman 35 years old, with a contracted pelvis, who had previously been delivered unsuccessfully on four occasions, came under observation at the end of the eighth month of her fifth pregnancy, for the purpose of having premature labor induced to secure delivery of a living child. On examination the pelvis

was found to be flattened, probably as a result of rachitis, with a diagonal conjugate of 9.2 cm. and a true conjugate of 7.5 cm. The appearances altogether suggested a twin pregnancy and the exigencies of the case made it essential that a positive diagnosis be made in good time; for in the existence of that condition premature labor was not called for, while in its absence the induction of labor prematurely was necessary to effect the delivery of a living child, as well as for the safety of the mother. Simultaneous auscultation of both sides of the abdomen by two persons on several occasions showed differences of from one to fifteen beats per minute. In accordance with this determination pregnancy was permitted to continue, labor setting in spontaneously two weeks earlier than had been expected and terminating in the successful delivery of a boy and a girl weighing 2210 and 2010 grams respectively.

It is necessary in thus employing auscultation in the diagnosis of twin pregnancy that the heart-count be made simultaneously and for at least a whole minute at a time. In private practice, when it is not convenient for two persons to make comparative observations, the physician may practise auscultation of the two sides of the abdomen in rapid succession. Under these circumstances it is important for the patient to make no change in her position during the examination, as any such movement may have a pronounced effect upon the heart-beat of the fetus and give rise to apparent differences that may occasion deception. The result of such observations may be accepted as conclusive only if the differences in the beats of the two sides are positive and pronounced; otherwise it will be necessary to resort to comparative simultaneous observations by different persons.

THE LOCAL ACTION OF THE X RAYS.

Ever since the discovery and the first practical application of the Roentgen rays there have been, as it was anticipated there would be, numerous claims of special effects on organisms and on various forms of life. Some of these have already been disproven or discredited, such for example as their alleged action on bacterial life. Whatever there may be in this, it has not as yet won any strong support in scientific quarters, and their value as a therapeutic agent, anticipated by some, is practically *nil* thus far. From various quarters, however, there have appeared and are constantly appearing reports of certain special inconvenient symptoms following exposure to these rays. Some of these, such as the subjective sensations experienced by some patients, may be practically accounted for by the existing nervous and mental condition of the patient in some cases. At least this is a possible way of explaining some of these symptoms; whether it will be fully satisfactory in all may perhaps be questioned. Other phenomena, however, like the dermatitis that has been observed, require another explanation and their essential connection with the X rays is a matter that is yet debatable. The fact that they fail in many who from long exposure might be expected to show them, proves nothing positively; the question of idiosyncracy has to be taken into account. There are many who resist other better known disturbing agencies and there may well be some who are immune to the deleterious influences of these rays. Perhaps we may even assume that this special kind of vulnerability is the misfortune of the few, and that most persons are immune. That there is a reality in these phenomena is proven by many observations, one of the most notable of which is reported by Dr. E. E. KING in the *Canadian Practitioner* for November. The patient in this case was an operator and exhibitor of the X rays and was more or less exposed to them for many hours a day for a number of weeks. The effects in this particular case were dermatitis and other alterations of the skin, destruction of hair and nails, and conjunctivitis. In this case, as in the case reported by Dr. G. C. SKINNER in the JOURNAL November 14, many of the symptoms corresponded with those of a severe sunburn, but others are rather peculiar, and it is a little remarkable, considering the penetrative powers of the rays, that the history gives no account of any involvement of the other portions of the integument and its appendages.

It is beyond question, apparently, that exposure to the X rays, if sufficiently prolonged, is sometimes accompanied with the production of lesions of the skin and the dermal growths. That ordinary or moderate exposure has no such effects in the average individual, is needless to argue, it is a self-evident fact. Whether these effects are due to some electric action, to ozone as suggested by TESLA, or to the direct action of these rays themselves, however, is another question and one that is yet to be solved. There is certainly an open field here for investigation.

THE RUSH MONUMENT.

Argument and entreaty, eloquence and rhetoric have been employed by the Chairman of the Rush Monument Committee of the ASSOCIATION, in his appeals to the profession and reports to the ASSOCIATION, on the subject of the Rush Monument, a memorial stone as yet *in futuro*. The sum so far raised is still entirely inadequate to build anything at all worthy of the ASSOCIATION. In the meantime the monument to SAMUEL HAHNEMANN is nearly finished as we learn from the following paragraph which appeared in the *Chicago Tribune* of Sunday, December 6:

> A large bronze memorial statue of SAMUEL HAHNEMANN, founder of homeopathy, which with its pedestal is to cost $75,000, will soon be erected in Washington by the homeopathic physicians of the United States. CHARLES N. NIEHAUS of New York is the architect.

Surely there is patriotism, public spirit and generosity enough in the American medical profession to build this monument! But the results are too slow.

The Treasurer of the Committee is Dr. GEORGE H. ROHÉ of Sykesville, Md., and he is very prompt to acknowledge a remittance.

There is an old story told of a traveling salesman who was selling engravings of WASHINGTON. On approaching a rich banker he solicited his subscription without result. The magnate said: "You wish to sell to me, an ardent lover of my country, a picture of GEORGE WASHINGTON? Why, sir," and at this point he placed his hand over his heart, "I have him always in my heart." "If that is really the case," said the commercial traveler, "all I have to say is, that you have WASHINGTON in a mighty tight place."

Have the medical profession such an esteem for the virtues of BENJAMIN RUSH that they have him so perpetually in mind that he needs no other memorial? Let the world know what the profession can accomplish when it really tries.

Let the Rush Monument be built.

CORRESPONDENCE.

"The Poisoning of a People."

LAGRANGE, TEXAS, November 1896.

To the Editor:—In your editorial "The Poisoning of a People," I find sentiments expressed which, although one comes across similar expressions of late in the secular press, are nevertheless in my humble judgment not quite up to the high standard of the JOURNAL; besides do such expressed sentiments remind me of the gloomiest days in my recollection; of the days of my boyhood, when the native born citizen looked with the utmost contempt on his foreign born neighbor and when in his desire to curtail the rights and privileges of these foreign born people, he would resort to the most stringent and desperate measures and would even arm himself and fight battles in the streets of our cities—*e.g.*, St. Louis, Mo., to defend his so-called prerogative rights against imaginary encroachments of the despised foreigner.

The views expressed in the JOURNAL and the sentiment of times gone by, only differ in the remedies recommended with which to combat the evil, and the difference in the nationality of the offensive intruders; they having been "ignorant Germans" during the "fiftieth" while at present they are filthy Italians, Slavs or Huns.

At the time of the revolution, the American people consisted of but a few millions of people. In the course of a little over a century we have become a nation of eighty millions and we boast of being one of the, if not *the* most civilized and enlightened people on the face of the globe.

What then were the influences brought to bear to make us in such short space of time of such huge proportions in every respect? The answer inevitably must be, that beside our free institutions and immense resources the main factor has been: The extended, wide open arms of this young nation, ready to receive and to greet the poor, the oppressed and the down trodden people of other countries and especially those of the old world, of worn-out monarchical Europe. Are we not ourselves, everyone of us, the descendants of such foreigners, so popularly called the "scum of nations," who have been drawn hither in advance of us, by the invitation of a free, self-sacrificing people and the allurements of our productive virgin soil which was, and is still but awaiting the till and toil of the breadwinners of the world?

The so-called Anglo-Saxon race, as represented in the United States, has manifested such an enormous power of assimilation as was never before shown by any other people. The Christian, the Jew, the Buddhist and Mohammedan, the Caucasian, Mongolian and even the Æthiopian have commingled. Europe has since the establishment of this government, and previous to this, dumped the inmates of its poorhouses, asylums and even its prisons onto our soil: but few of us are able to date back our ancestry to the cream of this "influx." According to your expressed views, instead of the American nation rivaling with other nations in culture and civilization we, the descendants of the emigrated "scum of the world" should be a nation of degenerates, a mongrel race having no power of resistance whatever, and whom but the slightest upheaval would sweep from the face of the earth; while we were fortified by a strife among ourselves, huge in proportions, ideal in inception and humane in its consequences, showing this nation to consist of an "admixture" of people who, although not as yet fully matured and fixed, but which must have most excellent quallities and which ultimately promises to become the equal, if not the superior of any people that live or ever lived. Respectfully, F. A. SCHMITT, M.D.

Administration of Antitoxin.

FAIRFIELD, IOWA, Dec. 5, 1896.

To the Editor:—In view of the occasional fatal effects of diphtheria antitoxin and the rapidity with which death occurs in these cases, I would suggest the advisability of dividing the administration of the desired dose into several stages at intervals of several minutes between the stages, giving but a fraction of the entire dose at each stage.

Tentatively I propose one-fourth, or less, of the intended dose at each stage of the injection, letting an interval of five or preferably ten minutes elapse between the stages of the injection. I do not conceive it would be desirable to withdraw the syringe and re-introduce it when interstages are not longer than ten minutes, but the needle can remain introduced until the injection of the entire dose is effected.

In case dying from the antitoxin, fatal collapse has usually resulted within five minutes from the time of completing the injection. As most operators occupy five minutes in making an injection of 10 c.c. of standard serum it would appear that ten minutes are required to allow the full depressing effect of the injection to be manifested, I would conclude that ten minutes is most reasonably the length of time which should be allowed to elapse between the stages of the injection of a full dose.

It is not probable that the antitoxin given in this manner would be any less effectual in enabling the cells to resist the toxins of diphtheria than when the entire dose is administered at a single stage. The plan certainly enables the operator to avoid giving an overdose in patients who are peculiarly susceptible to its toxication, because he can prolong the intervals between the stages of its administration or suspend it altogether upon the occurrence of alarming symptoms.

While only one death results from many thousand injections it is desirable to avoid even that one death and to avoid arousing local prejudices against a most valuable remedy.

J. V. BEAN, M.D.

Harvey Medical College.

CHICAGO, Dec. 7, 1896.

To the Editor:—In the last issue of the JOURNAL but one, there is published a defense by Byron Robinson of the Harvey Medical College, which has been designated by a writer, "A Diploma Mill." According to his showing the college requires

four courses, all of which are given in the evening between seven and ten, that is, not more than three hours out of the twenty-four. In the reputable medical colleges students usually spend from eight to nine hours at the college daily, besides three or four hours in close study in their rooms; therefore, according to Dr. Robinson's showing this institution only requires about one-quarter, certainly not more than one-third the amount of work demanded by the reputable colleges, and it still appears to us that he has not established his case against those who call the institution, "A Diploma Mill." It is not probable that a man who has given his whole day to his trade will be able to put in three solid hours work in the evening in study; or if it be conceded that he can do this it is evident that this is very much less time than ought to be required. It is beyond our comprehension how reputable medical men can lend themselves to such an enterprise. If they wish to establish a night school in good faith they should lengthen their course to twelve years, which would give their students about the same amount of time now required in reputable colleges.

INQUIRER.

"Aphasia of the Hand."

CORTLAND, N. Y., Dec. 1, 1896.

To the Editor:—In reference to your very interesting editorial in the last number of the JOURNAL on "Aphasia of the Hand" will you allow me to call your attention to the opinion of Max Knies, as to the location of the lesion. You will find it at the bottom of page 92 of the German edition of "Die Beziehungen des Sehorgans und seiner Erkrankungen zu den übrigen Krankheiten des Körpers und seiner Organe."

It is, as you will notice, that for writing, the important special center for the right hand lies about in the middle of the posterior central convolution.

Yours sincerely, F. W. HIGGINS, M.D.

"God and the Doctor we Alike Adore."

PHILADELPHIA, Dec. 2, 1896.

To the Editor:—In the JOURNAL of November 28, a correspondent who signs himself R. M. W., inquires as to the authorship of the following lines:

"God and the doctor we alike adore,
But only when in trouble, not before.
The trouble o'er, both are alike requited;
God is forgotten, and the doctor slighted."

I have been familiar with a similar stanza for several years and am inclined to think that the lines are incorrectly quoted by R. M. W.

In a "Code of Medical Ethics" by Jukes de Styrap, M. K. Q. C. P., etc., London, 1886, he will find the following:

"God and the doctor we alike adore
When on the brink of danger not before;
The danger past, both are alike requited;
God is forgotten and the doctor slighted!"

This does not answer your correspondent's question but it may perhaps give him a clew to its solution.

Yours truly, FREDERICK P. HENRY, M.D.

NORTH EAST, PA., Dec. 6, 1896.

To the Editor:—The Alma Mater of Dr. Burnside Foster of St. Paul, ought to take him across her maternal knee for translating the beautiful Latin of (??) Euricius Cordus as an answer to the query of R. M. W., of Brooklyn *in re* the authorship of the lines "God and the doctor" et sequens. The proper although liberal translation of this quotation from E. Cordus is I think as follows:

"Three faces wears the doctor;
When first sought an angel's;
And a God's, the cure half wrought.
But when the cure complete,
He seeks his fee,
The devil is less terrible than he."

The next time B. F. essays a translation I trust he will honor his Alma Mater better than he has with this "his maiden effort."

By the way I have often wished some enterprising firm would embellish this translation from E. Cordus as a motto for the doctor's office. Yours truly,

B. H. PUTNAM, M.D.

CHICAGO, Dec. 5, 1896.

To the Editor:—Regarding the quotation you inquire about I think that you have slightly misquoted. At the time this appeared in print, something like seven to ten years ago, I copied these lines, which were accredited to *Texas Journal*. They read as follows:

"God and the doctor we alike adore
Just on the brink of danger, not before;
The danger passed, both are alike requited,
God is forgotten, and the doctor slighted."

N. H. CHURCH, M.D.

5 Blue Island Ave.

NEW INSTRUMENTS.

A NEW TROCAR AND CANULA WITH SAFETY GUARD.

BY JOHN S MARSHALL, M.D.

CHICAGO.

This instrument was devised with a view to prevent accidents in the opening of the cavities of the antrum, the chest and cysts, hydroceles and large abscesses.

There is always danger when puncturing the antrum of Highmore, the thorax and other cavities which are filled with fluid abnormal in character and which must be evacuated of the trocar under the force sometimes necessary to puncture the tissues forming the walls of these cavities, injuring the organs contained within them, or of passing through the opposite wall and causing injuries to structures beyond.

To render such accidents impossible this instrument has been fitted with a safety guard entering the handle of the instrument by means of a screw thread which makes it possible for the operator to set the guard so that the trocar and canula will enter at any depth that he may judge will be the thickness of the walls of the cavity to be punctured, without fear of injury to the important structures within or beyond. The handle also contains a device, operated by the thumb, which throws the canula forward, covering the tip of the trocar and allows the trocar to be withdrawn, leaving the canula in position. Its construction is such that the parts are easily separated and rendered aseptic by boiling.

Charles Truax, Greene & Co. are the makers of the instrument, to whom I am indebted for the mechanical perfection of the idea.

36 Washington St.

IMPROVED ATOMIZER.

To throw larger quantities of the medicinal fluid on the surfaces of the lesions in nose and throat affections, Müller of Carlsbad has added to the Körting apparatus a metal spiral inside the tube. The fluid is forced through the very small bore of this spiral at a pressure of 3 to 6 atmospheres, and with an opening of ½ mm. in diameter, a liter will be expelled in three minutes, and yet the pressure of the spray as it emerges is not strong. An olive tip excludes the air when the nose is sprayed and a bell-shaped piece answers the same purpose for the mouth. Müller has derived great benefit from

Carlsbad spring water applied in this way, especially in ozena, although the spray produced a slight transient hemorrhage at first in these cases. He adds that any salt solution would probably prove equally effective.—*Wien. klin. Rundschau*, November 15.

A NEW RUBBER FOOT.

An improvement has been made recently in artificial feet by A. A. Marks.

The new invention consists of the insertion of a mattress of canvas in which is imbedded side by side a layer of narrow, flat steel springs. The canvas holds them in the pocket, in which they slide freely, and the ends are capped with metal to prevent their perforating the rubber and leaving their proper bed.

The rubber which rests above this mattress is spongy, containing, therefore, a large percentage of air, increasing the lightness and also the flexibility of the foot. Further, just above the posterior end of the mattress in the heel there is a large air chamber so arranged that it can not burst, and thus preventing the heel from matting or failing in elasticity.

The operation of this steel spring mattress is to throw the toe back as it is bent in walking and thus to materially assist in locomotion.

IMPROVED POCKET CUSPIDOR.

The neat little nickeled case scarcely takes up any more room in the pocket than a package of cigarettes and is eminently adapted to its purpose. The inner receptacle is easily removed to be cleaned and boiled, while it closes moisture proof, with an inside cover of amianthus. It is the invention of Dr. Petit of Paris.—*Bull. de l'Acad. de Méd.*, November 10.

PUBLIC HEALTH.

Tuberculosis in Animals.—Cadiot has been making a study of the pulmonary diseases of dogs, etc., which he finds are very often tuberculous and complicated by external lesions. The frequency of tuberculosis among dogs, cats and parrots he considers a menace to human beings.—*Bulletin de l'Académie de Méd.*, November 17.

Preventive Inoculation of Typhoid Fever.—The unexpectedly favorable results obtained in India under Haffkine's direction with preventive inoculation of cholera (more than 100,000 persons inoculated) have led to numerous experiments in similar inoculation of typhoid fever. Iwanow describes in the *Bolnitschnaja gaseta Botkina*, No. 20, successful immunizing of monkeys, and Pfeiffer in the *Deutsche med. Woch.*, No. 46, relates his favorable experience with inoculation of healthy persons and describes his methods, adding that preventive inoculation promises to render great services in epidemics of typhoid fever, and in military camps threatened with it.

Sanitary Regulations in Brazil.—The regulations in Bahia as recorded in the *Gaceta Médica*, in regard to the sale of meats, seem strange to northern readers. The shops must be built according to certain requirements as to size, situation and ventilation, not less than four meters in each direction, and are never to be used as a habitation nor for any other purpose than a market, with white marble slabs for cutting the meats and marble or tiled floors sloping down to the street. No meat must be allowed to touch the walls, nor be exposed to the sun, and it is strictly forbidden to sell meat that has been killed over twenty-four hours. All meat over twenty-four hours old must be thrown into the sea. The butchers are licensed and required to wear white aprons and caps when at work, with their number exposed, and fines are to be enforced for neglect to comply with any of these regulations.

Can Not Regulate Noise of City by Injunction.—A bill was filed, in the case of Wende v. The Socialer Turn Verein, asking for a perpetual injunction to restrain the defendant from permitting any one to play upon its bowling alley and from permitting loud and boisterous noises to be made by persons there. At the close of the complainant's evidence the judge said: "I can not regulate the noise of the city by injunction and I am not going to try it. If these people have made any noise there, that injured this property, the property of the complainant here, she has her remedy at law; she can go before a jury, and if she can satisfy a jury that her property has been damaged by their acts, or by their improper use of their premises, then she can get a verdict." This, the appellate court of Illinois, first district, says, in an affirmatory decision handed down Nov. 19, 1896, is a terse expression of its views. Choosing to live in a great city, it adds that the complainant must take such use of adjoining property as the inevitable concomitant of city amusements.

Salary in Lieu of Fees.—The New Jersey statute relative to morgues and morgue keepers provides that the fees and expenses of morgue keepers for the recovery and care of the bodies of unknown dead shall be fixed by the board of freeholders and paid by the county collector, and it also provides that they shall be entitled to a burial fee not exceeding $10 in each case. Under color of the foregoing, the board of freeholders of Camden County passed a resolution in 1887 that "the morgue keeper shall perform such duties as are provided for by law, and shall receive a salary of $500 per annum, payable quarterly by the county collector." The morgue keeper from that time until 1893 received the salary, and then, after the expiration of his term of office, applied for a writ of mandamus to compel the board of freeholders to fix his fees and expenses as morgue keeper. But the supreme court of New Jersey says, Powell v. Board of Chosen Freeholders, June 24, 1896, that the only ground that the payment and acceptance of the salary could be accounted for on, was that it was in satisfaction of the fees and expenses allowed for the performance of the duties imposed by law, and that with seven years' salary in his pocket the claimant could not get the "fees and expenses" also.

Power of Iowa Boards of Health to Employ Physicians.—In an action brought by a physician to recover from a county for services rendered and supplies furnished a pauper, the supreme court of Iowa holds, Tweedy v. Fremont County, Oct. 29, 1896, that it must not only be shown that the patient was a pauper, but that his parents or other relatives liable therefor are unable to pay the claim. Conceding that his inability to pay is made to appear, the fact that he is a pauper and a county charge does not show that there is no relative who is liable and able to pay it. It frequently happens, continues the court, that the needs of a poor person are so urgent that relief must be furnished him at the expense of the county, for lack of time to compel relatives who are liable for his support to relieve him. In such a case the person relieved is a county charge, although the county may be able to recover from his relatives the sum which it has paid on his account. Section 14 of chap-

ter 151 of the Acts of the 18th General Assembly provides that "every local board of health shall appoint a competent physician to the board, who shall be the health officer within its jurisdiction, and shall hold his office during the pleasure of the board." Also that "the local boards shall also regulate all fees and charges of persons employed by them in the execution of the health laws and of their own regulations." As that is the latest enactment on this subject, the court holds that it must prevail so far as it conflicts therewith, over section 1366 of the Code which provides that "all claims and bills for the care and support of the poor shall be certified to be correct by the proper trustees and presented to the board of supervisors, and if they are satisfied that they are reasonable and proper, they are to be paid out of the county treasury." In this case allowance by the board of health of $6 per visit for thirty-four visits and $1 for fruit furnished the patient is considered, under the evidence, reasonable and just, though the board of supervisors had objected to allowing same.

Removal of Garbage Controlled by Board of Health.—Where power is conferred upon the common council of a city to regulate by ordinance the collection and removal of garbage and offal, the supreme court of errors of Connecticut holds, in the case of State v. Orr, decided June 15, 1896, that it has authority to pass an ordinance which provides that no person shall collect and transport such refuse matter as accumulates in the preparation of food for the table without first having obtained a permit from the board of health. But "refuse matter," as the term is thus employed, the court says can embrace nothing which has not been refused or rejected as unsuitable for table use. It may be thus rejected because it has little or no value for human food, or because it is decayed or unwholesome. It must in its nature be perishable, and can include little which is not liable to become decomposed or offensive if left where it falls. In fact, the term as here used, can only extend to matter which is in effect noisome or which has been rejected by the owner as worthless. Meat trimmings, potato parings, specked apples and many other things of a like character might be thrown away in preparing table dishes, and yet properly utilized afterward for other purposes. Under such an ordinance as the one in question, whatever is not abandoned as worthless, remains property, which so long as it does not constitute a nuisance, may be sold or otherwise disposed of at the will of the owner. By the board of health contracting with a single person to collect and remove garbage from the entire city or with several persons to collect and remove it from as many different portions of the city, or contracting with respect to a part of the city or to certain buildings, leaving the removal of garbage from other places open to those who obtain from its clerk a proper permit, the court further holds will no monopoly be created by which the rights of citizenship will be infringed upon. Over any such occupation a strict watch must be kept, and the general police powers vested in the city justify the implication of a right to limit the number of those who pursue it. In a prosecution for the violation of an ordinance like the above, evidence is properly excluded that the defendant had been for many years engaged in collecting and removing garbage in the city in carts so constructed as to satisfy the requirements of the ordinance, and applied for a license to continue, but met with a refusal, the board of health having a right to limit the number engaged in this particular occupation and he having no absolute title to a license. Even if the number of licenses issued was unreasonably small his only remedy, if any, would be to apply for a mandamus to compel the board to grant him one. He could not pursue the business because wrongfully refused a license. Nor could he justify himself by showing that the garbage he collected came from certain restaurants, with the proprietors of which he had contracts for its removal, such evidence being inadmissible. If the evidence had shown both that the contents of the defendant's cart, while they had been rejected for table use, were not offensive and were in his possession as the agent or purchaser of the original owner, then, the court says, in line with what has been suggested, he would have required no license.

A Home-made Filter for Domestic Purposes.—In the *Brooklyn Medical Journal*, September, Prof. Peter T. Austen of the Brooklyn Polytechnic Institute has devised a simple method that takes advantage of the property of alum, in minute quantity, to form a gelatinous precipitate with bicarbonate of lime in solution, and nearly all drinking waters contain more or less of that substance. This precipitate serves to entangle suspended matters so that waters containing clay and mud may be filtered perfectly clear, even through a coarse filter. The alum itself is not carried through the filter, but forms a part of the precipitate, and is removed by filtration. This should be well understood, although if a minute amount of alum were left in the water its effects would not be noticeable, and even if present in larger amounts, it would not be at all dangerous. "The method of filtration is simple in the extreme. An oil bottle, or any long, narrow-necked bottle, serves for the filter. Tie around it a string soaked in kerosene, about half an inch from the bottom, set the string on fire and hold the bottle bottom up. When the string is burned out the bottom of the bottle is thrust into cold water. If properly done, this causes the bottom of the bottle to split off evenly. The rim of the glass should now be burred off a little with a round file to remove any sharp edges that may be left. The bottle is then thoroughly cleaned and placed neck downward in a convenient support as, for instance, through a hole bored in a shelf, or it may be allowed to stand in a wide-mouthed bottle, resting by its shoulders on the rim of the mouth. A small handful of cotton wool is now thoroughly wetted by squeezing it in water, and shreds of it are dropped into the bottle until a layer about two inches deep has been made. The shreds should be dropped in carefully, so as to distribute them evenly, and not to let them pile up in the middle or at the sides. When enough cotton has been dropped in, a cup or two of water is poured in and the bottle gently tapped. This consolidates the mass and finishes the making of the filter-bed. The amount of alum needed to coagulate the water sufficiently for filtering need not, as a rule, exceed two grains to the gallon, and in many instances may be less, but in certain cases of very dirty waters, such as that of the Mississippi River, the amount of alum may be increased to four or even six grains per gallon. The alum is best kept in a solution of such a strength that a tablspoonful of it will contain a grain. To save trouble, the following prescription will enable one to get enough of the solution put up at any apothecary's to last for a considerable time:

R	Alum	128 gr.
	Aquæ dist	16 oz.
	Misce, ft. solutio.	

"I may add that the expense of this prescription, including the bottle, should not exceed fifteen cents. The treatment and filtration of the water is best done as follows: A gallon of water is placed in a clean tin pail and two teaspoonfuls of the alum solution are added. It will save time to make, once for all, scratches on the inside of the pail, showing the height of one, two or more gallons of water. It is then well stirred and mixed with a clean tin dipper. It is best to keep this pail and dipper for this use alone. They should be kept scrupulously clean, and frequently well scoured with sapolio or a similar kind of soap. After mixing, the water is allowed to stand five or ten minutes, and then poured, by means of the dipper, into the filter. It will run through rapidly if the filter-bed has been properly made, and will be as clear as crystal, and not seldom will form an astonishing contrast with the original water. The first half pint of the water passing through should be rejected. The filtered water may be caught

in a pitcher or in any other convenient receptacle. A filter-bed will last a day, but it is not advisable to use it longer. Each day the used filter-bed should be thrown away and a fresh one prepared. The method may, of course, be applied to any of the many filters in use by simply adding to the water to be filtered one or two grains of alum to the gallon. It will be a poor filter, indeed, that will not filter clear after this addition."

The Ministry of Health.—The London letter of the *American Practitioner and News*, October 17, quotes an important address by the late Sir B. W. Richardson, in favor of a national bureau of health for the British Empire, with a president, a chief officer and a competent body of officials under them. The construction and duties of the Ministry of Health would lead to several divisions of labor. In addition to the registration of births, deaths and marriages, a complete system of registration would be established and the returns supplied would include not only the diseases affecting human kind, but diseases affecting animals and plants. The reports of meteorologic conditions would be duly sent to the ministry and the relations of meteorologic states and the prevailing health would be effectively and systematically traced out. The returns of coroners' courts would likewise be sent, and to the Ministry of Health would be referred all the work now carried out by the medical department now under the control of the Local Government Board. The working of the act dealing with adulteration and the carrying out of public analysis would of necessity be brought under its direction. Officers appointed under the new regulations would especially report to the Ministry of Health on sanitation of the factories in the whole of the kingdom. The work hitherto done by the veterinary department of the Privy Council would be transferred to the same ministry. Prison and police supervision and the supervision of public works would also become functions of the Ministry of Health. Sir Benjamin Richardson suggested that there be six departments, the registration department, the local government department, factory and industrial department, analytic and chemic department, veterinary department and public works and prisons department.

BOOK NOTICES.

Manual for the Medical Department, U. S. Army, 1896.

The Army Regulations issued in 1881 was an exceedingly bulky octavo, which was supposed to contain instructions for every one in the military service on all points connected with his duties, privileges, etc. The edition of 1895 was on the contrary a rather thin volume, as it contained only general regulations or such as affected every officer and man of the army irrespective of corps. This issue had to be supplemented by special manuals giving in detail the regulations affecting each individual as a member of his particular corps. There has, therefore, just been published by authority of the Secretary of War for the use of the Army of the United States a small octavo volume of 120 pages, compiled under the direction of the Surgeon-General and entitled a "Manual for the Medical Department, 1896." This volume does not in any way alter the current methods of the department. It merely separates the departmental regulations from the general army regulations, with which they were formerly embodied and presents them revised to date for the use of army medical officers. It has been compiled with the utmost care and contains the gist of all orders, circulars and decisions published since the issue of the Army Regulations of 1881. It gives, however, no instruction as to the manner in which various reports and record books should be kept. It is understood that all such instructions will hereafter be printed as notes on the blank forms to which they relate, and that these notes having been approved by the Secretary of War, will have the force of army regulations. This system places the requirements and methods of his department very concisely before the army medical officer; but it will be difficult for an outsider, a member of the National Guard, for instance, to get information covering all points unless he is possessed not only of a copy of the manual but of a series of the blank forms and record books or of the notes or directions that are printed on them.

Handbook of Subsistence Stores, U. S. Army, 1896.

Under this title the War Department has just published a volume of 200 pages compiled under the direction of the Commissary General from monographs written by officers of the Subsistence Department. This volume is intended to be to the Subsistence officers what the dispensatories are to medical men and pharmacists. It gives them a concise and accurate description of the various articles borne on the list of subsistence stores of the army, with the source or preparation, physical appearances and properties, tests of purity and methods of preservation of each of the articles.

For facilitating references the monographs or their abstracts are arranged alphabetically, beginning with that on "apples," and ending with "vinegar." Under the heading "flour" are described the grades and methods of milling, the quality of the gluten, the quality of the starch, the best flour for making bread; winter wheat and spring wheat flours; sweating of wheat and flour; strength of flour; sprouted wheat flour; earthy smelling flour; souring of flour; good keeping flour; variation in the chemic composition; mode of packing; storage; brands of flour; uniformity of quality in mill brands; effects of age on wheat and flour; and lastly methods of testing including that by the extraction of the gluten. Under the title "baking powders," are given tests for tartaric acid, potassium, lime, alum, ammonium salts, phosphates and sulphates, with methods for determining the quantity of carbon dioxid liberated and of the starch present as filling. An appendix contains notes on canned goods and on the various insects that are destructive to articles of subsistence, such as the dermestes lardarius or bacon bug, the musca vomitoria or meat fly and sundry species of calandra or weevils. As the articles are essentially practical the handbook will be of great assistance to subsistence officers by giving them a thorough knowledge of their stores.

NECROLOGY.

Eugen Baumann, M.D., of Freiburg. The medical world had scarcely realized the importance of the discovery of iodin in the thyroid gland, and the far reaching benefits to be derived from this knowledge, and the application of thyreoiodin, when the sad news comes that an unsuspected heart disease has ended the career of the gifted discoverer before he was 50. His early scientific training was that of a pharmacist, and his tastes lay in that direction to the end, although he attained such renown as a chemist and physiologist. His studies of sulphone resulted in the discovery of those wonderful hypnotics, sulphonal and trional, and from his laboratory came also the great analgesic, phenacetin.

Professor Hanot of Paris. The sensational suicide of this successful and talented physician and instructor in his 53d year can only be explained by overwork and domestic troubles. He was found dead in his room with a vial of potassium cyanid in his hand. The specialty he had made his own and to which he made most valuable contributions, was the pathologic liver. His monographs on this subject from every point of view were gems that evidenced infinite research and brilliant mental qualities. The list of his published articles fills a column in the *Progrès Médical* of October 31.

GEORG RICHARD LEWIN, M.D., in Berlin, age 76; one of the foremost leaders in medical science of the latter half of the century, a famous physician and conscientious instructor. Hypodermic injections of sublimate had been tentatively attempted before him, but his great work on the treatment of syphilis with mercurial hypodermic injections of mercury (1868) established the methods, the dosage, and all other details with such accuracy and skill, that even to this day they are accepted as the standard, and have been applied to thousands upon thousands of patients, and in every land, without serious injury to a single patient, as he stated recently with pride. Other important works were on syphilis of the larynx, interstitial myositis, leucodermia (founded on over 6,000 observations), atrophy of the face, etc., amounting in all to 55 large works. The monographs published in the *Annals* of the Charité, form alone a total of almost 1,100 pages. All kinds of honors had been bestowed upon him at home and abroad, and death surprised him in the midst of a most beneficent and varied activity. One of his latest addresses, for which he had prepared with great care, was delivered at a public health meeting, on the diseases caused by the inhalation of dust.

PINCKNEY WEBSTER ELLSWORTH, M.D., (College Physicians and Surgeons, N. Y., 1839) a grandson of Oliver Ellsworth once a Chief Justice of the U. S. Supreme Court, and a son of ex-Governor Wm. W. Ellsworth; born in Hartford, Conn., Dec. 5, 1814, died in the city of his birth, November 29. His commission as a surgeon U. S. V. was dated August 3, 1861, and his reputation soon extended much beyond the boundaries of his State.

GUSTAVUS B. TYLER, M.D., at Owensboro, Ky., December 1, aged 76. He was at one time a West Point cadet and he graduated from Jefferson Medical College, Philadelphia in 1845. He was one of the best known general practitioners in the State.

SOCIETY NEWS.

The Anderson County Medical Society has been organized at Lawrenceburg, Ky., with Dr. Frank B. Powers, president, and Dr. G. Lillurd, secretary.

The Ohio Dental Society held its annual meeting at Columbus December 2. The election of officers and directors resulted as follows: President, Dr. L. E. Custer, Dayton; first vice-president, Dr. Grant Molyneaux, Cincinnati; second vice-president, Dr. L. L. Barber, Toledo; secretary, Dr. L. P. Bethel, Kent; assistant secretary, Dr. H. T. Harvey, Cleveland; treasurer, Dr. C. I. Keely, Hamilton; directors, three-year terms, Drs. J. R. Callahan, C. M. Wright, O. N. Helse, W. D. Snyder; two-year terms, Drs. W. H. Hirsch, E. G. Barnett, A. E. McConkey and C. R. Buter; one year, Drs. C. H. Harroun, J. A. Lupton, W.H. Hague and J. Taft.

MISCELLANY.

Professor E. Fraenkel of Breslau has been restored to his former scientific and professional activity by a recent successful operation for progressive myopia.

New Clinic in Moscow.—Madame Basanow has built and presented to the University of Moscow a hospital and clinic for diseases of the throat, ear and nose, with ample endowment for twenty-five beds and the salaries of those in charge.

Koch's Missions.—Prof. Robert Koch has just returned from the eastern provinces of Germany, where he was sent to investigate the numerous alleged cases of leprosy, which he found to be a mistaken diagnosis. He has now started for South Africa at the request of the Cape Government, to make a study of the rinderpest.

Progress in Surgery of the Joints.—The tendency seems to be to avoid anchylosis in the cure of tuberculous affections of the articulations, and Calot even states that no lameness should remain after a coxalgia is cured. Of course this means an early and prolonged course of treatment with careful supervision.

Experiments on Thyroidectomized Dogs.—Gottlieb states as the results of his experiments on five dogs, that thyroiodin alone is not able to keep dogs alive whose thyroid glands have been removed, but that this has been accomplished by the thyroid extracts (thyroden), and he therefore concludes that there must be in the thyroid gland something more than the merely physiologically effective substance.—*Deutsche Med. Woch.* No. 15.

Insurance Lost by Use of Intoxicants.—In the case of Rainger v. Boston Mutual Life Association, the supreme judicial court of Massachusetts said, Oct. 26, 1896, that inasmuch as it could have no doubt that the habits the insured had of using intoxicating liquors to excess, increased the risk, his answer, when he made application for insurance, that he used a "glass of beer once in a day or two," must be held, as matter of law, to have voided the policy.

The New York Summer Rest Society.—One of the noticeable summer philanthropies is the opening of a house of rest for self-supporting gentlewomen who can secure board in a beautiful New Jersey town for $3.50 per week. The society aims to provide generous board and home privileges, while there shall also be complete change and relaxation after the winter's work. The society has purchased a house and twenty acres of woodland near Woodcliff (once Pascack), N. J., and will open the Summer Rest from June 1 to October 1.

Ovarian Therapeutics.—Touvenaint reports fifteen cases treated and benefited by the administration of ovaries from a young cow, dried to a powder at a constant temperature of 25 degrees C. His conclusions are favorable and confirm those already announced by others. The dose should not average over 0.24 to 0.40 centigrams a day, but it is safe to prescribe and can be kept up for weeks or even months. It seems particularly indicated in amenorrhea and chloro-anemia, and proves useful in the troubles due to the natural or artificial menopause.—*Journal de M. de Paris*, October 25.

International Privileges to Physicians in South America.—In contrast to the restrictive measures recently adopted in Europe, the various countries of South America have entered into an agreement to recognize impartially the graduates of each other's medical and pharmaceutical colleges, and accord them the same privileges as natives. This means in the Argentine Republic and some others, the payment of a fee of $150 to $300 (300 to 600 pesos), when the applicant's diploma is examined and accepted by the university faculty. Brazil and Chile are the only countries which have not yet signed the agreement.

Exclamations Admissible in Evidence.—Exclamations or complaints made by a person undergoing physical examination by a physician, with a view to ascertaining the extent of his alleged injuries, and apparently made in response to manipulations of the person's body or members by the physician, the supreme court of Georgia holds, in Broyles v. Prisock, decided Jan. 13, 1896, are admissible in evidence, though such person was not under the treatment of this particular physician and the examination was being made solely for the purpose indicated. Whether or not the exclamations were involuntary, or the complaints were *bona fide*, is for determination by the jury, under all the evidence submitted.

Ovarian "Pockets."—The *Wien. klin. Rundschau*, November 15, contains a contribution to our knowledge of the ovaries and tubes by an extensive study of the same organs in the lower animals. It seems that they are much more complicated in them than in the human species, with, in some cases, an

actual pocket to contain the organs, varying in size with the species. The ovaries and tubes are in none of them in actual contact and the transmission of the ovum is accomplished by the fluids, etc., as in man. Those of amphibious animals and reptiles resemble the human organs more than the rest, and it is curious to note the similarity that prevails in the most dissimilar species as, for instance, in certain rodents, beasts of prey, hoofed animals and edentates.

Honors to Army Surgeons.—The *Revista de Sanidad Militar*, a semimonthly Spanish journal, contains in its columns many articles which indicate that the Spanish people recognize that a war is in progress in the Island of Cuba. It publishes the special orders of the War Department or such of them as possess an interest for medico-military readers. In its issue for the two weeks ending Sept. 15, 1896, we find that the services of army medical officers meet with appropriate recognition, for no less than eight special orders were issued during the period August 27 to September 9 granting the Red Cross of the First Class of Military Merit to medical officers for their gallant conduct in certain specified engagements with the Cuban insurgents.

Contradictory Results of Castration for Hypertrophy of the Prostate.—The *Gaz. Méd. de Paris*, of November 14, quotes an article by Socin urging the necessity of more exact indications for castration and section of the vas deferens, as the success in some cases is offset by the failure in so many others. The single case benefited in his own nine operations, was a man whose prostate gland had been partially resected two years before. He states that Kroenlein reports two absolute failures, Kraske the same, and Czerny has had three patients whose troubles seemed to be much aggravated by the operation. On the other hand, Bruns has cured two cases by castration and Gelpke has resected the vas deferens in two cases, one of which was a failure but the other was a great success. We trust, however, that the day has passed when removal of any normal organs for any purpose will be countenanced for a single moment.

Kola Preparations.—The *American Therapist* has the following warning under this subject: "Kola preparations in endless array have been introduced during the past year, and the public has been educated through newspaper puffs to look for marvelous strengthening power from any proprietary form of kola, while the legitimate use of kola medicinally has rather decreased, and it has been more or less discredited in the minds of the medical profession. The opinion is logical that the principal therapeutic value of kola lies in its caffein; if there is special potency in the combination of principles in the crude fruit, it is also true that this has been observed only when the fruit is taken fresh, and not dried, transported and stored for months, and finally incorporated into palatable and elegant wines, elixirs, tablets, etc. In France kola preparations have long been popular, but there is no pretense there to deny that caffein is used and kola gives the name.

Intraprofessional Ethics.—Dr. H. C. Wood has issued in pamphlet form his address before the last graduating class of the medical department of the University of Pennsylvania. His closing paragraphs dealt with the question of the ethical deportment of young practitioners toward their professional brethren—the question of intraprofessional ethics. His thoughts on this subject are drawn up in the form of a heptalogue of aphorisms, that may be read with interest and profit by others than those for whose counsel they were intended. "The soul of professional ethics," says Dr. Wood, "is the recognition of the universal brotherhood of medicine, and the application of the Golden Rule: To do unto others as you would have them to do unto you. Based upon these principles, I venture to offer you certain aphoristic rules: 1. To consider the doctor as a member of your own family, having an inherent right to your medical services; but to remember yourself not to abuse this right. 2. To consider any discovery or any invention you may make as belonging not to yourselves but to the general profession. 3. Never in any way to laud your own medical skill or to attempt to supplant in public or private estimation one of the medical household. 4. To join yourself as soon as may be to the incorporated companies of your fellows for scientific and social intercourse, and for the cultivation of that professional conscience which often binds men more closely than their personal sense of right and wrong. 5. Through good and ill report to stand by members of your own profession, unless they be guilty of moral evil."

Discovery of a New Ferment in the Blood.—We are all familiar with the transformation of amyloid substances into fatty matters, urea and glycogen, and the fate of the two latter. But our knowledge of the fate of the fatty matters has always been vague, and an important advance has been made by Hanriot's discovery of a saponifying ferment in the blood, to which is due their transformation into fatty acids. These in turn form stearates of soda in combination with soda, and are then transformed successively into butyrates, acetates and finally carbonates of soda, which pass again into the blood. His experiments with monobutyrin of glycerin which led to this discovery, are described in the *Bulletin de l'Académie de Médecine*, of November 10.

Object of Commission de Lunatico Inquirendo.—The main purpose of a commission de lunatico inquirendo, the supreme court of Pennsylvania says, *in re* Misselwitz, Oct. 5, 1896, is to determine in the first place, whether the subject of the inquiry is a lunatic or not, and if he is found to be a lunatic, then to provide for the safeguarding of both his person and his property. Pending the inquiry it sometimes becomes necessary to make temporary provision for the custody and safekeeping of one or both. The appointment of a temporary custodian or receiver pending the litigation to prevent mismanagement or waste of the alleged lunatic's property, etc., rests in the sound discretion of the court in which the inquiry is pending; and it requires a clear case of abuse of that discretion to justify the interposition of an appellate court.

A Contention Over the Site of a Consumptives' Home.—The *Boston Medical and Surgical Journal*, July 23, refers briefly to the difficulties attendant upon the locating of the new Free Home for Consumptives, in that city. About one week ago, the mayor of Boston gave a hearing in the aldermen's room to the remonstrants who have petitioned the mayor not to approve a measure passed by the city government allowing the erection of a new building upon the Quincy Street grounds of the Free Home for Consumptives. The said building is to be four stories high and some sixty by over one hundred feet long, and is to be built without the brick dividing wall required by the building ordinances of the city. The petitioners claim that the risk to the patients and the neighbors by fire should forbid the erection of a hospital building without every precaution being taken for its safety. They claim damage to surrounding residential property and an unnecessary exposure of the citizens to infection. They claim that such a hospital can be as easily and usefully maintained at a greater distance from the dwelling parts of the city. Several petitioners were heard, and the hearing was continued to a later day.

Angina Pectoris in Neurasthenia.—In the *British Medical Journal*, Dr. Rendu is quoted, from his contribution to the *Journal de Médecine*, July 10, as having recognized the following case as one of neurasthenic angina pectoris: A man aged 40, of robust appearance, notwithstanding he had suffered from typhoid, malaria and yellow fever, but whose health for the last five years had been good, was attacked by influenza. After this he began to suffer from peculiar attacks consisting in a kind of crisis arising in the little finger, extending up the arm,

and finally becoming more marked, accompanied by feeling of oppression and agony, with, on some occasions, syncope. After a short period in hospital these attacks became somewhat better, but returned to recur daily. There was no physical signs of either heart or lung disease. Rendu considers the diagnosis in this case one for reflection as to whether it were a case of true angina pectoris or not. In the case in question, as there were no signs of cardiac affection, as angina is uncommon up to the age of 40, and as the pain began peripherally, the author was rather inclined to deny its being true angina pectoris. The previous history of influenza would also, he considers, be in favor of the less grave condition; and as the patient also suffered from headache, sleeplessness and dyspepsia, the conclusion come to was that the case was simply neurasthenic. On these grounds the man was treated, with the result that the attack rapidly subsided and the general health was restored.

Cures of Insanity after Many Years.—Ventra warns against legislation to allow insanity as a cause of divorce, as improved methods of caring for the insane are resulting in cures, even after all hope has been abandoned. He has forty cures of this kind to report in his experience with the 3,531 insane patients received at Nocera, during the last thirteen years. Fourteen were cured during the fourth or fifth year after their insanity had developed; 6 during the sixth to seventh; 6 during the eighth or ninth; 8 between the tenth and eleventh; 3 between the fourteenth and fifteenth, and 3 in the twentieth year. Of these 21 were female, and 19 were male patients, and the ages varied from 20 to 54. In 19 the disease was hereditary, but in none were there traces of congenital degeneracy. The cure was spontaneous in 13; favored by work in 16; by injections of morphin in 5; by follicular dysentery in 1; by typhoid ileus or erysipelas in 1; by chronic intestinal catarrh in 2; by an operation for cataract in one and the extract of cannabis indica in another. The forms of insanity cured where chronic sensorial delirium in 18; primary paranoia in 8; lypemania in 7; mania in 6 and hysteric frenzy in 1 case.—*Gaz. degli Osp. e d. Clin.*, October 25.

Suppression of the Crystalline Lens.—Since Fukala suggested this method of treatment for progressive myopia seven years ago over 402 operations of the kind have been published, as stated in an article in the *Annales Méd.-Chir. de Liège* for October: Fukala, 37; Hippel, 60; Thier, 50; Sattler, 86; Valude, 2; Abadie, 3, etc. Some perform discission alone, and others follow it by extraction. Some also make a very small incision, and others a large one. The general procedure seems to be to test the power of absorption of the lens in regard to the vitreous humor, and proceed accordingly. When there is a congenital cataract, for instance, the lens is attacked very slightly. If it does not swell or absorb much, the operation is recommenced a week later. If the case is carefully watched, there is no fear of hypertonicity; if the finger reveals that the pressure is increased, and if the field of vision is narrowed all that is necessary is to make a simple linear extraction, with or without suction of the lens. The general opinion seems to be that discission is to be preferred under 25 years of age; above this, some extract, others still prefer discission. All state that by far the best results are attained on young patients. The degree of myopia that justifies intervention is above 10 D. in children; 14 to 15 D. in adults, according to Fukala, Pflueger and Schweigger; or 16 to 18, according to Abadie. Whether to operate one or both eyes is still disputed; some asserting that it is best to operate one eye, and reserve that eye for near work, while the other, with glasses, serves for all ordinary purposes. Thier seems to be the only operator who does not hesitate to perform the operation when there are choroid lesions, which the rest consider a counter indication. The exact state of the eye should be determined with atropin before attempting any intervention. Valude had one patient become totally blind from displacement of the retina, and Lang reports two cases of displacement in his five subjects. The visual acuity is often increased, sometimes doubled or even quadrupled. Hippel has noted an improvement of 1–10 to 2–10 and even 7–10. Sattler has seen slight improvement in twenty-eight of his eighty-six cases, but in eighteen there was no perceptible improvement. The general conclusions are that it may prove of great benefit to young persons with such myopia or feeble sight that any kind of work is impossible; but that interference with older persons who are able to pursue their usual occupations is unadvisable. Discission is by far the least dangerous method of procedure. It lengthens the treatment slightly, but the traumatism is much less than from extraction, the danger of infection is less, and also of displacement of the retina.

Dedicatory Exercises of the Chicago College of Dental Surgery.—The dedicatory exercises of the new buildings of this College took place on Friday evening, December 4, when speeches were made by Dr. Truman W. Brophy, W. M. Lawrence, D.D., Judge Richard S. Tuthill, Dr. John B. Hamilton, Professor M. P. Thomas of Lake Forest University, and Dr. C. N. Johnson.

The exercises were opened by the Dean, Dr. Brophy, who delivered a brief address in which he spoke of the growth of the college and of the history of dental education in the city of Chicago. He said the Chicago College of Dental Surgery was the first institution of its kind in this country to introduce and use for the benefit of its students a complete apparatus for the cultivation of bacteria, thus demonstrating the active agents that cause caries of the teeth and methods for effecting their destruction. The institution was the first to organize freshmen students into classes for practical work in dental technology, both operative and prothetic. In addition to these innovations in teaching, clinics were organized in the college and conducted for the benefit of the senior students by the most skillful and successful practitioners. The clinical instruction is still carried on and to an extent unequaled in former yeárs. Realizing the necessity of securing a permanent location for the college, the lot was purchased upon which the building now stands in 1888, situated on the corner of Wood and Harrison Streets. The first section of the structure was erected in 1893, and the first course of instruction began in it November 1 of that year. Beginning with the present year plans were perfected and the building of 1893 has been doubled in capacity, so that the college now consists of a six-story structure, having a frontage of 85 by 120 feet. Each floor contains an area of 10,080 square feet, divided in accordance with suggestions and plans made, after having carefully examined the best regulated dental schools in the United States, thus enabling the faculty to incorporate the most modern features in its construction. Dr. Brophy then traced the growth of the college from the summer of 1883 up to and including 1895 96. The faculty of 1883 consisted of three, matriculates 18, and no graduates. In the session of 1895-96 the college has 87 teachers, and 503 matriculates.

Dr. W. M. LAWRENCE then followed with an address in which he said that he knew of no similar history along educational lines anywhere. He had the honor to be somewhat connected with the Chicago University and its growth had been phenomenal, yet, at the same time, he could say pretty accurately that the figures given by the dean proportionately exceeded any statistics which we might have the pleasure of presenting for the contemplation of the citizens of Chicago. He congratulated the faculty on having erected such a fine structure. He congratulated the cause of sound learning in having another illustration of faith in the genius of man, the power of the human heart and the capacity of the human mind.

Judge TUTHILL said that when he was a boy people never had their teeth attended to and that every old man and old woman

must have been toothless; that they went out of the world in about the same condition as to teeth that they came into it. At that time everyone seemed to think it was the normal arrangement and that people when they got old had no business with teeth. He believed that nothing had been done in medicine or surgery that had so added to the happiness of mankind as the work that had been done by men skilled in the art of dentistry.

Professor THOMAS followed Judge Tuthill. He was glad to see evidences, from the history which had been given by Dr. Brophy, that the College was not simply growing in extent, but becoming a genuinely progressive institution, an institution which is adding not simply to its numbers in its faculty and students, but to its curricula or courses of study, to its enlarged and advanced requirements, an institution which means a better educational product, men who are better able to do the special work to which they are called and to which they are devoting themselves by virtue of the broad, generous culture which the College was giving them. This, to his mind, told more for the glory of the Chicago College of Dental Surgery than anything else which he had heard.

The next speaker of the evening was to have been Dr. Nicholas Senn, but in his absence the vacancy was filled by Dr. John B. Hamilton, Professor of Principles and Clinical Surgery in Rush Medical College.

Dr. HAMILTON said that some thoughts had occurred to him while the preceding speakers were talking that might be of interest to the students, and one thought was that we were apt to think, in the clamor of a jubilee such as this, that everything was modern with which we had to do; that we forgot the filled teeth of the mummies and the Aztecs and the specialism which existed in the old Alexandrian school. Coming down to modern times we could congratulate ourselves that after a long period of darkness the revival of dentistry was due to America. In 1887, when he was executive officer of the first International Medical Congress held in this country, the question of the representation of dentistry as a distinct section came up and after due consideration it was decided to give full accord to the dental profession in that congress the same as to any other branch of medical science. It was greatly to the credit of this country that this was done, as America had reaped the benefit of it. The French Government sent a representative over here to inspect and investigate our dental colleges and to report to his government as to their condition and what he thought of our method of teaching; and this report, by Dr. Kuhn of Paris, on the dental art in the United States was, in the opinion of Dr. Hamilton, one of the most comprehensive reports ever published on the subject. At the same time, the report was most flattering, in that the author stated that European dental colleges could in no way compare with those in the United States. Dr. Kuhn spoke particularly of the Chicago College of Dental Surgery, but which at that time was under different auspices from those at present. The Philadelphia Dental College was particularly mentioned. After citing the different conditions that prevailed in dentistry in foreign countries and comparing them with the dental colleges in the United States, he (Kuhn) framed a bill, to be presented by the Minister of the Interior to the French Chamber of Deputies, with a view to procuring a charter for a dental college in Paris that would compare favorably with American dental colleges. No higher praise could be accorded American dental colleges than the compliment paid to them in this report. As to Dr. Evans, Dr. Hamilton said he was more than an ordinary practitioner of dentistry; he was foremost in the sanitary work of the Franco-Prussian war. The so-called American ambulance was the creation of Dr. Evans. Dr. Evans left his patients, went to the front, organized an ambulance service, and while French surgeons were busy caring for the wounded, Evans was busy with the ambulance corps in organizing general hospitals in the rear; and the story of the services of that noble, illustrious man in the Franco-Prussian war was enough of itself to elevate the profession to which he belonged to a high plane among the sciences and the educated men of the world.

Dr. C. N. JOHNSON said the first dental college was established in this country in 1839, but it was difficult to get at the curriculum of that college at that time. The number of teachers and students at the first or opening session was four. Dr. Johnson then dwelt upon the importance of educating the public to a proper appreciation of the practice of dentistry. The laity should be taught that the highest aim of dentistry was to add to the comfort, the longevity, the physical beauty and happiness of the human race.

At the conclusion of Dr. Johnson's speech the students, faculty and invited guests repaired to one of the spacious operating rooms, where refreshments were served and short speeches made by Drs. W. C. Barrett, A. W. Harlan, Thos. L. Gilmer, W. L. Copeland and Mr. C. G. Morrell and Dr. L. L. Skelton. Excellent stories were told by Mr. W. Woodruff, the Arkansas humorist; Opie Read, the well-known author; Mr. Richmond, the well-known journalist and Mr. W. B. Lockwood. Dr. C. N. Johnson recited a poem entitled "Our Quarrel." After singing Auld Lang Syne, the audience quietly dispersed.

Cincinnati.

THE MORTALITY REPORT for the week shows: Zymotic diseases 18; phthisis 10; other constitutional 4; local 58; developmental 6; violence 5; under 5 years 29; total 101; annual rate per 1,000, 15; preceding week 100; corresponding week 1895, 110; 1894, 137; 1893, 193.

THE FOURTH ANNUAL REPORT of the Massillon State Hospital shows $194.50 on hand. Appropriated up to beginning of fiscal year $160,000. Appropriation for 1896, $100,000, and for 1897, $150,000 with the authority to enter into contract for $300,000 and to purchase land not to exceed $14,000. When completed 400 patients can be cared for.

THE JURY in the Ewing v. Goode $25,000 damage case failed to agree on a verdict and were discharged. This is the case of a woman who sued a physician for malpractice for the loss of an eye from secondary glaucoma alleged to be due to an iridectomy.

A CASE of yellow fever was reported to Cincinnati recently by a Texan who had come from the Cuban army. The man has recovered.

AN OUTBREAK of diphtheria at North Bend, Ind., has been traced by the health officer to milk tickets that were used by customers of a milk man who had the disease in his home.

THE HEALTH DEPARTMENT of Kenton, Ohio, have decided to compel the school children to provide individual drinking cups as a sanitary precaution.

DR. C. H. METZ of Madisonville has made a valuable contribution to the Academy of Medicine library in the way of rare German medical works.

THE STATE BOARD of Live Stock Commissioners have rendered their report in which they state that animal tuberculosis is on the increase to an alarming extent and they urge legislation empowering them to isolate and treat the diseased cattle.

THE SUPREME COURT has decided that the presentation of a copy of the U. S. Pharmacopeia of 1890 is not competent evidence in a prosecution of a case by the Dairy and Food Commission for violation of the pure drug laws for the reason that the statutes take as a standard the Pharmacopeia that was in use at the time of the enactment of the law, which would be the 1880 edition; the commissioner claims that the department is rendered to all intents and purposes powerless to enforce the law by this decision as the defendants would claim that the 1880 edition could not be used for the reason that it has become obsolete.

DR. OLIVER P. HOLT was elected to fill the vacancy in the

City Hospital caused by the resignation of Dr. Frederick Kebler, Dr. Henry Bettman was elected pathologist and Dr. H. Kennon Dunham, curator. The salary of Dr. Shields, receiving physician is raised from $60 to $75 per month.

A COLORED minister of Bellefontaine, Ohio, died last week from inhaling the fumes from a lot of potato bugs he was burning in a pan on the stove.

THE QUESTION of establishing a city laboratory for the diagnosis of diphtheria as being discussed by the profession, and it is expected that some arrangement will shortly be made whereby this work can be done under the management and expense of the city. The plan of the New York City Board of Health will doubtless be followed. At the meeting of the Academy of Medicine the importance of this movement was emphasized by the presentation of the statistics of the treatment of antitoxin and the importance of the early diagnosis. The consensus of opinion was that the first day of the disease was the time *par excellence* for the administration of the serum. The statistics showed that the percentage of mortality had been reduced from 56 and 75 per cent. to 2 per cent. when the injection was made on the first day and to 5 per cent. of all cases reported. The experience of a Berlin Hospital was given as follows: The mortality in past years has been 56 per cent., but was reduced by antitoxin to 4 per cent.; the former high mortality was immediately reached when the serum gave out only to be again brought down after a new supply had been secured.

Louisville.

REMOVAL.—Dr. H. H. Grant announces his removal from 415 West Chestnut Street to Suite 321, Third Floor of the Equitable Building, Fourth Avenue and Jefferson Street. Dr. T. H. Baker will have an office in the same suite.

BURIAL PERMITS.—A new ordinance has just been recommended by the health officer concerning the return of burial permits to the health office, which should become a law at once. Under the old law it was possible for a burial to take place and the return be handed in to the health office three or four days afterward. The new ordinance is very explicit as to this, as no body can be moved until a death certificate has been handed in, and that within twenty-four hours after the death. This must be properly signed by the attending physician, and no burial can be permitted in any cemetery or burying ground unless a permit from the health office is presented. This permit is to be filed away and subject to the health officer's inspection at any time. A monthly report is to be made by the keepers of the cemeteries as to the date of burials and the name of the deceased and undertaker, in order that it may be checked with a corresponding record kept in the health office. A penalty is provided for a violation of this ordinance by physicians, undertakers or sextons.

THE WESTERN INSANE ASYLUM.—The forty-second annual report of this institution, covering a period of twelve months, has just been issued from the office of the public printer. During the twelve months 133 new patients, seventy males and sixty-three females, were admitted; making a total number of patients under treatment during the year 774. Deducting the number discharged, died and transferred, there were 623 patients remaining in the institution Sept. 30, 1896. The death rate was only 5.68 per cent. of the number of patients treated. During the year fifty-one patients were restored and discharged, thirty male and twenty-one female. The cost per capita for the maintenance of the patients was only $148, but it would have been more had not a great deal of the farm products been raised on the farm of the institution, which is worked by the inmates, all harmless patients who are desirous of doing some work. Of the 133 patients admitted during the year, 109 were born in Kentucky, fourteen in Tennessee, and the rest scattered through several States. Seventy were married, thirteen widowed, and one man was divorced. The ages ranged as follows: Thirty-four between 30 and 40 years; thirty-three between 20 and 30; twenty-two between 40 and 50; fifteen between 50 and 60; nine between 60 and 70, and six between 70 and 80. Eighty-one of them were either farmers or members of farmers' families; two were day laborers; eleven were farm laborers or members of their families; six domestics, and three were ministers' daughters. In their tendencies nineteen were suicidal, thirty-one homicidal, and twenty were both suicidal and homicidal. The preponderance of the number of cases drawn from the farmer class is surprising, though this has been noted by observers before. At a recent meeting of trustees of the Lakeland Asylum (near this city), Dr. Satterwhite, a member, advocated the employment of the inmates of the institution at some occupation that had been theirs before their admission if that could be ascertained, and if not to put them at something light, as shoe or broom making, farming in good weather, and other like employments. This is the policy in vogue at the Western Asylum. The remarks of Dr. Satterwhite were well received, and a committee appointed to take action at once on the recommendations.

GRAY STREET INFIRMARY.—This institution, which is the hospital of the Hospital College of Medicine, will be ready for occupancy on December 20, with a full quota of nurses and fully equipped in every respect. The building is a commodious though unpretentious one on the exterior, and will be a great addition to the Hospital College, giving the students in attendance an excellent opportunity of seeing practical instruction in the operating room and at the bedside.

DR. THOMAS HUNT STUCKY, President of the Mississippi Valley Medical Association, is in poor health and has been ordered away by his physicians. He will probably go to New York for a much needed rest.

Elimination of Mercury.—Further observations made confirm Mironowitsch's announcement that considerable amounts of mercury are eliminated through the skin, which deprives the analysis of the urine of some of its importance in this respect. Kudisch also announces that the mercury is eliminated through the urine much more rapidly and in much larger quantities when the injections are intravenous than when they are subcutaneous.—*St. P. Med. Woch.*, November 7, from *Wratsch.*

THE PUBLIC SERVICE.

Army Changes. Official List of changes in the stations and duties of officers serving in the Medical Department, U. S. Army, from Nov. 28 to Dec. 4, 1896.

First Lieut. William H. Wilson, Asst. Surgeon U. S. A., is granted thirty days' leave of absence, to take effect about Dec. 20, 1896.

Change of Address.

Breakey, J. F., from Pontiac to Ann Arbor, Mich.
Dunne, A. J., from Pittsfield to Springfield, Mass.
Eichberg, L. R., from Chicago to 332 W. 85th St., New York, N. Y.
Gilbert, James L., from Bunker Hill to 301 W. Broadway, Logansport Ind.
Miller, R. E., from 3255 State St. to 291 31st St., Chicago.

LETTERS RECEIVED.

Alta Pharmacal Co., St. Louis, Mo.; Anderson, Jos. W., Ardmore, Pa.
Baker, E. F., Jacksonville, Ill.; Bittman, Chas. W., St. Louis, Mo.; Bock, Charles, Fort Wayne, Ind.; Battle & Co., St. Louis, Mo.
Carter, Howard, St. Louis, Mo.; Chenoweth, J. S., Louisville, Ky.; Cooley, J. S., Glen Cove, N. Y.; Center, Chas. Dewey, Quincy, Ill.; Cullen G. I., Cincinnati, Ohio; Catlin, Samuel, Tecumseh, Mich.
Daniel, J. B., Atlanta, Ga.
Fassett, Chas. Wood, St. Louis, Mo.
Hannold, Fred C., Chicago; Hare, H. A., Philadelphia, Pa.; Hubbard, G. W., Nashville, Tenn.; Hummel, A. L., Adv. Agency, New York, N. Y.; Horlick's Food Co., Racine, Wis.; Haldenstein, J., New York, N. Y.
Ingals, E Fletcher, Chicago.
Little, J., Bloomington, Ill.; Love, I. N., St. Louis, Mo.; Long, F. A., Madison, Neb
Maxwell, J. B., Mt. Carmel, Ill.
Newman, A. L., Newark, N. J.; North, Lucian G., Tecumseh, Mich.
Osler, William (2), Baltimore, Md.
Paquin, Paul, St. Louis, Mo.; Philips, Ferdinand, Philadelphia, Pa.; Pleak, S. M., Keokuk, Iowa.
Reed, R. Harvey, Columbus, Ohio.
Saunders, W. B., Philadelphia, Pa.; Stein, O. J., Chicago; Smith, Frank Trester, Chattanooga, Tenn.; Schering & Glatz, New York, N. Y.; Sattler, Robert, Cincinnati, Ohio.